

May, 1953

# SOAP and Sanitary Chemicals

## *In this issue...*

**Soap and detergent effect  
on skin in hand washings**

☆☆☆

**New instant silver dips—  
their formulation and use**

☆☆☆

**Tall oil—moves to front  
in soaps and specialties**

☆☆☆

**Is a paste wax auto polish  
best for new car finishes?**

*Cover photo . . . H. W. Hamilton,  
secretary of C.S.M.A. since 1941, has  
been active in the organization since  
1920. He served as president in 1928-  
29. C.S.M.A. holds 39th mid-year  
meeting at the Drake Hotel, Chicago,  
May 17-18-19. Details on Page 149.*





# NEW!

*from the*  
**D & O Laboratories**

## <sup>®</sup> DETEROMES

A perfume compound that will withstand the high temperatures of manufacturing process, and mask even the tenacious odor of a petroleum base. These are the basic perfuming requirements of the synthetic detergent industry . . . and these are the primary properties of DETEROMES. A newly developed group of fragrances for liquid and powder detergents, DETEROMES are a direct answer to the inherent problems of the industry.

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Perfume Compositions.

### OUR 154th YEAR OF SERVICE

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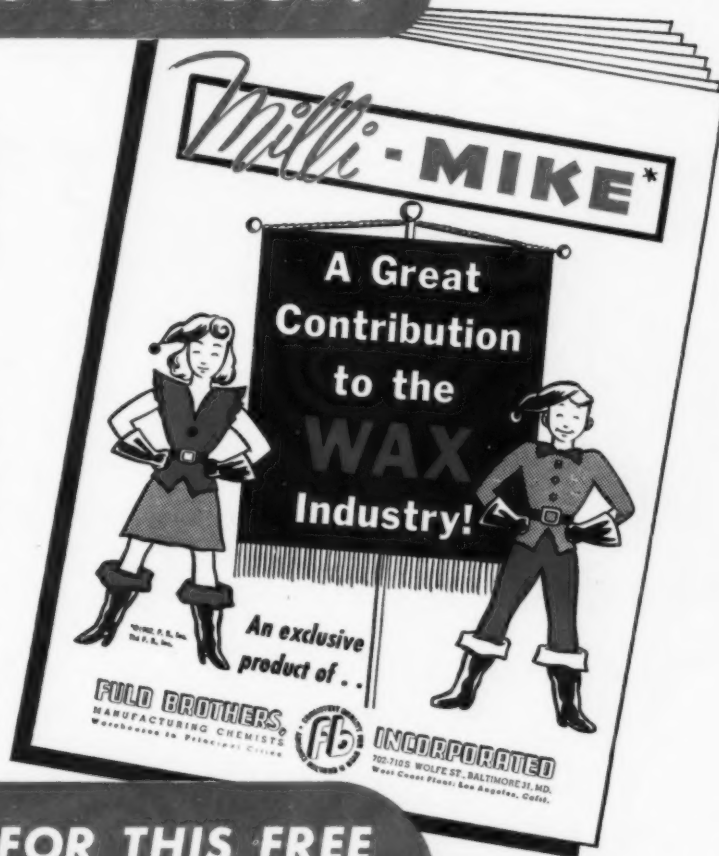
# IF YOU SELL WAX AT A PROFIT

**... THIS IS A MUST!**

This 8-page booklet gives you the reasons why you can sell Premium Guaranteed Quality MILLI-MIKE for \$3.00 to \$4.00 a gallon . . . yet buy it under your private label at a medium wax price.

**MILLI-MIKE Sales are Booming!**  
MILLI-MIKE has been on the market long enough to stand up under the test of time. A great sales success, MILLI-MIKE paints its own profit picture everywhere introduced.

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**WRITE TODAY FOR THIS FREE  
EIGHT-PAGE BOOKLET!**

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**FULD BROTHERS,**  
MANUFACTURING CHEMISTS  
Warehouses in Principal Cities



**INCORPORATED**  
702-710 S. WOLFE ST., BALTIMORE 31, MD.  
West Coast Plant: Los Angeles, Calif.

MAY, 1953

# build more soap sales with ... ACTAMER\*

nonirritating bacteriostat



## Laboratory tests prove ACTAMER reduces resident skin bacteria over 97%.

Controlled hand-washing tests with Actamer-containing soaps show Actamer reduces by 97.5% the resident skin bacteria generally believed to contribute to body odors and minor skin infections.

In addition to its application in deodorant and complexion soaps, this new Monsanto product shows promise for use in such products as: diaper rinses, laundry detergents, shampoos, shaving creams, and surgical scrub soaps.

Actamer has been proved by rigorous skin studies to be neither a primary irritant nor sensitizer. It has exceptionally low toxicity for warm-blooded animals.

*Economical.* Write for a quotation. You'll be pleasantly surprised at the price.



\*Trade-mark

For further information on Actamer, or a sample, write to MONSANTO CHEMICAL COMPANY, Organic Chemicals Division, 800 North Twelfth Blvd., St. Louis 1, Missouri.



SERVING INDUSTRY...WHICH SERVES MANKIND

SOAP and SANITARY CHEMICALS

# SOAP and Sanitary Chemicals

Volume XXIX, No. 5

May, 1953

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## CONTENTS

In Brief—As the Editor Sees It.....	39
As the Reader Sees It.....	41
Tall Oil .....	42
By Arthur Pollak	
Effect of Soap on Skin.....	46
By Svend G. Johnsen and John Eben Kirk	
Riddiford Brothers Builds on Service.....	49
By H. H. Slawson	
Standards in the Soap Factory.....	52
By Dr. J. L. Boyle	
New Products Pictures.....	56
Soap Foam Improvers.....	95
C.S.M.A. Meets in Chicago.....	149
Aerosols .....	152
Shellac .....	154
By Henry Blanchford	
Silver Dips .....	161
By Howard Brenner	
Auto Polishes .....	171
By William Lewers	
New Disinfectant Role.....	179
By J. G. Ellis and C. K. Crocker	
Bids and Awards.....	83
New Trade Marks.....	85
Production Clinic .....	103
Products and Processes.....	107
New Patents .....	109
Soap Plant Observer.....	111
Sanitary Products Section.....	115
Classified Advertising .....	205
Advertisers' Index .....	211



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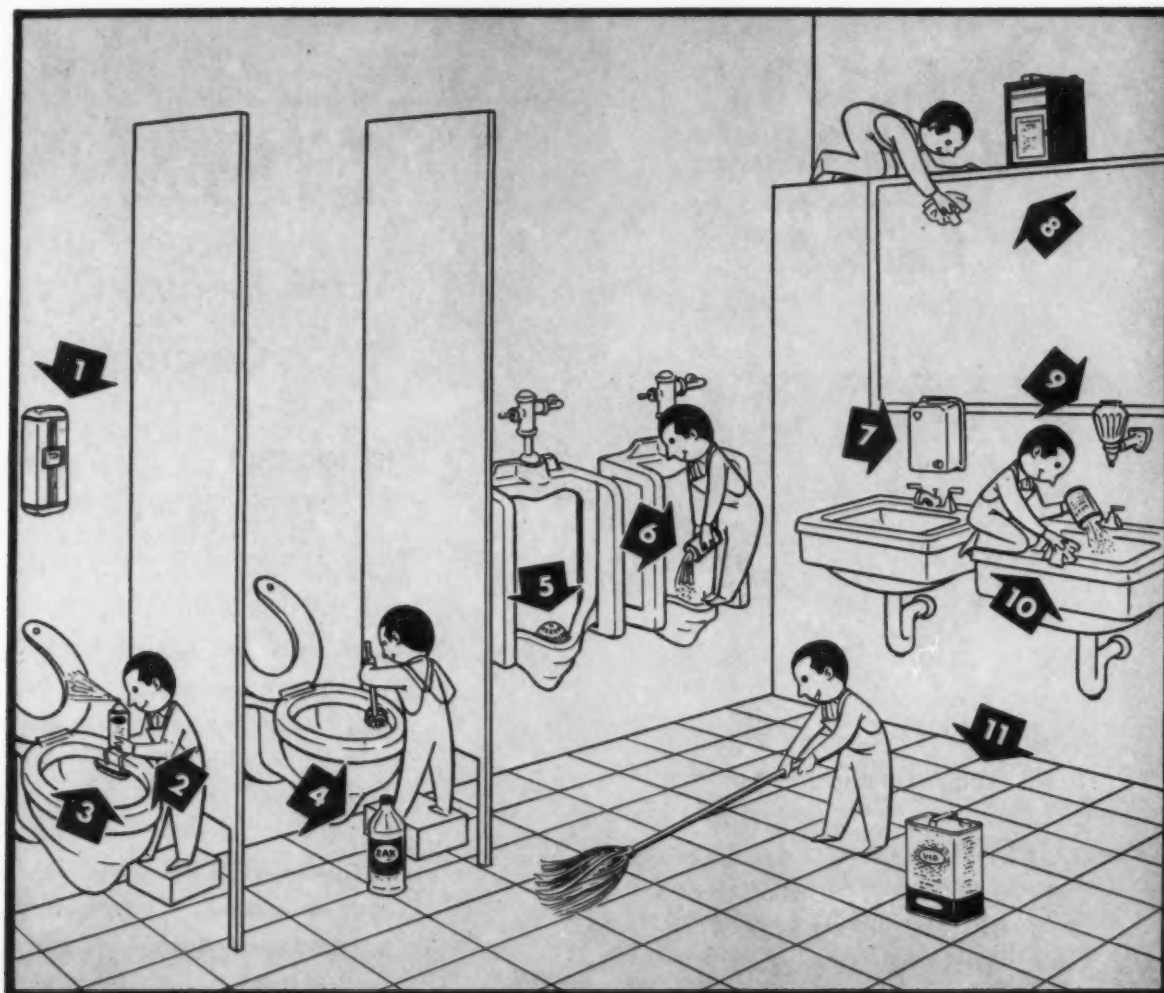


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CHEMICALS



PERFUMERY SPECIALTIES · ESSENTIAL OILS · AROMATIC CHEMICALS

# These Toilet Room Necessities Bring you Big Volume Repeat Sales all year long!



**1 CHLOROFAL** liquid air freshener and dispenser

**2 AIR-GLY** aerosol odor killer and disinfectant

**3 AIRECON** destroys odors at source

**4 ZAX** bowl sanitizer, rust and scale remover

**5 OK** solid form deodorant and holder

**6 DRAIN PIPE CLEANER** cleans and opens drains

**7 HYOLAN** lanolated powdered hand soap and dispenser

**8 GLASS POLISH** (wax type) cleans glass, tile, porcelain, chrome

**9 40 PLUS** liquid hand soap and dispenser

**10 FOAMING CLEANSER** for lavatories and all toilet room surfaces

**11 VIP** germicidal floor and wall cleaner

FOR DETAILS,  
PRICES,  
WRITE . . .

*Hysan* **PRODUCTS COMPANY**

932 West 38th Place • Chicago 9, Illinois



# **NINOL 1281**

## **... TWO SYNTHETIC**

**for Heavy Duty  
Cleaning**

**NINOL 1281** is a 100% active non-ionic amine condensate detergent which makes an ideal base for heavy duty cleaners. It is *non-rusting* . . formulations can be safely packed in unlined steel pails and drums. It has *high viscosity* . . its unusual thickening action results in a high body (and high sales appeal). It features *controlled foam* . . suds are stable but moderate, and don't interfere with rapid rinse or pickup when cleaner is in use. And it is *low-priced* . . mighty important in making products for highly competitive fields.

**a nonionic detergent especially  
recommended for  
SYNTHETIC FLOOR CLEANERS  
WALL CLEANERS . . STEAM CLEANERS  
WHITEWALL TIRE CLEANERS  
GRANULATED SOAPS  
DUST ABATEMENT**

### **SEND THIS COUPON NOW!**

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Gentlemen:

Please send me Technical Service Bulletin S-101, describing the use of

**NINOL 1281**

as well as other information, and a working sample.

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TITLE \_\_\_\_\_

COMPANY \_\_\_\_\_

STREET & No. \_\_\_\_\_

CITY \_\_\_\_\_

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**Detergents ~  
Emulsifiers**



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*In Canada: Chemical Developments of Canada Ltd., 420 Laguchetiere Street W., Montreal 1, Quebec*



# VERSATILE DETERGENTS

*for Copious  
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**NINEX 21** is a 60% active liquid detergent containing a combination of sulfonates and foam-stabilizing amides. It features unusually *high foam stability* in the presence of grease. It has *adjustable viscosity* . . . gives the proper body for any type of dispenser or to suit any glass container, by varying dilution and formulation. It is *non-rusting* . . . you can pack it in unlined steel pails. And it's available at unusually *low cost* . . . priced to help you sell at a profit.



*a foam-stabilized anionic detergent  
especially recommended for*

**LIQUID DISHWASHING DETERGENTS  
CAR WASHING COMPOUNDS  
BAR GLASS CLEANERS  
FABRIC SHAMPOOS  
BUBBLE BATHS  
FRUIT WASHING**



Detergents—  
Emulsifiers

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Please send me Technical Data  
Sheet describing

**NINEX 21**

as well as other information, and  
a working sample.

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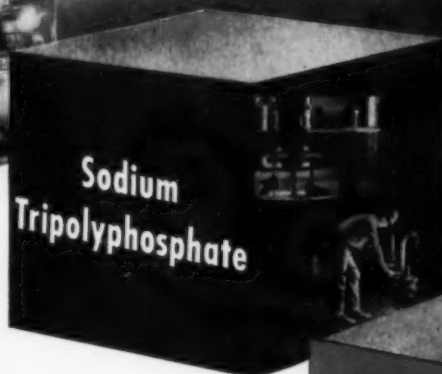
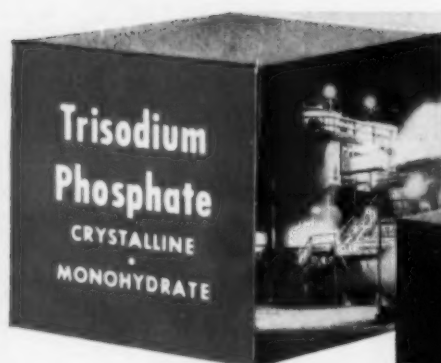
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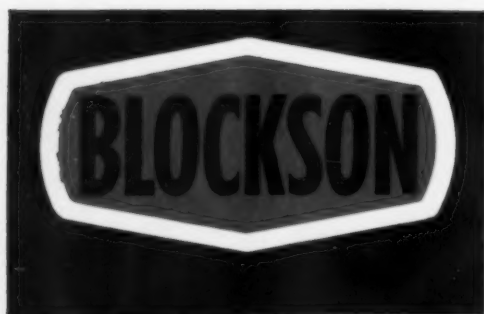
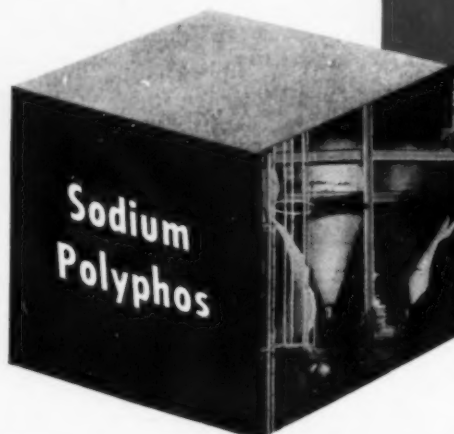
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Sodium Polyphos is Blockson's brand name for a water soluble Glassy Sodium Phosphate with the desirable characteristics of Sodium Hexametaphosphate and Sodium Tetrphosphate.



BLOCKSON IS ALSO A MAJOR PRODUCER OF...		SODIUM ACID PYROPHOSPHATE
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Look to  
**SHULTON**  
For  
First  
Quality  
Fine  
Chemicals



Among those we are now offering:  
Eugenol • Iso Eugenol • Heliotropine • Vanitrape  
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*Samples and prices available on request.*

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# CAND-DOX

Candy's Wax  
with LUDOX\* added

Candy's **NEW NAME** for

the new floor treatment for

**Increased Anti-Slip**

**Greater Durability**

**Lower Floor Maintenance Cost**

**2 GRADES**

## CAND-DOX #CS

Originally offered as CANDY'S SUPREME  
Special WR-AS in July 1950

## CAND-DOX #BB

Originally offered as BRIGHT BEAUTY  
Special WR-AS in June 1951

CAND-DOX #CS and BB are made in any total  
percentage of solids 8% to 18% and in 24%  
concentrate.

CAND-DOX #CS is slightly more durable and  
higher priced than CAND-DOX #BB in like per-  
centage of total solids.

Floor treatments represent the finest products available  
where a higher than minimum recognized standard of anti-slip  
quality is desired. The resultant films from the use of these products  
are **HARD**, non-tacky, and will withstand wear, dirt and discoloring  
traffic marks.

**DURABILITY and ANTI-SLIP**... CAND-DOX products include a compensating  
factor—LUDOX\*—in itself harder than wax. The addition of LUDOX\*  
to the proper wax bases, perfected purposely to accommodate this ad-  
ditive, causes a greater coefficient of friction and therefore greater  
safety underfoot.

**WATER RESISTANCE and REMOVABILITY** in proper balance are very  
important in every maintenance program. In the development of the wax  
emulsion bases that go into CAND-DOX floor treatments, the important all-  
around high qualities of our (Standard) CANDY'S SUPREME, BRIGHT  
BEAUTY and other well known and accepted waxes were taken into con-  
sideration and accomplished in the final CAND-DOX products containing  
the new bases plus additive.

**BEAUTY** of floors maintained with CAND-DOX floor treatments, which are  
both hard and very anti-slip, is no less than remarkable and equal to the  
lustre for which our products have long been famed. The same buffing  
can be applied, if desired, and the same gloss will result.

Our policy in regard to use of new additives to our  
floor waxes has always been clear-cut... if a  
definite improvement can be accomplished we  
endeavor to formulate and combine new ingre-  
dients in such a way as to conform to our very high  
standards of product function. These standards in  
no case are ever sacrificed to climb on any "band-  
wagon" of sales appeal.

The laboratory work in ours or any organization  
is very important and the starting point for re-  
search and development of new useful products.  
However, **FIELD TESTING** is the real proof of the  
real value of any floor treatment. CAND-DOX floor  
treatments have been thoroughly field tested and  
are now being sold in quantity by many of our  
distributors, with success—again proving merit in  
**FIELD USE**.

\*\* CAND-DOX contains CANDY'S wax emulsion with  
LUDOX\* added in such proportion as to fully  
deliver the usefulness of this additive to floor wax.  
\*Trademark of E. I. du Pont de Nemours & Co.,  
(Inc.) Reg. U. S. Pat. Off.

CAND-DOX is available for private brand resale and  
is sold only through distributors except for experi-  
mental accounts in Chicago essential to research.

Why not write us today for free samples and prices so that you can make your own **FIELD TESTS**?

The most complete line of water  
emulsion waxes of the highest  
quality available anywhere

CANDY'S SUPREME (Standard)  
CANDY'S SUPREME Special WR  
CANDY'S DELUXE  
BRIGHT BEAUTY (Standard)  
CANDY'S #640  
#CS CAND-DOX  
#BB CAND-DOX


All the above CANDY products are listed by Underwriters'  
Laboratories as "anti-slip floor treatment materials."

Wax Specialists for over 60 years  
**Candy & Company, Inc.**  
2515 W. 35th ST., CHICAGO











# OILS      FATS

CONVERSION AND PHYSICAL PROPERTIES CHART





When it comes to

## COCONUT FATTY ACIDS AND ITS DERIVATIVES DREW IS FIRST AND FOREMOST

DREW LAURIC ACIDS					
APPROXIMATE CHEMICAL COMPOSITION	AAB %	ABL %	AB %	ABH %	AAAR %
Capric C10	—	—	—	—	—
Caprylic C8	2.0	1.5	1.0	1.0	1.0
Capric C10	4.0	3.5	3.0	3.0	2.0
Lauric C12	98.0	79.0	60.0	60.0	45.0
Myristic C14	2.0	13.0	18.0	18.0	22.0
Palmitic C16	—	8.0	7.0	7.0	11.0
Stearic C18	—	1.0	1.0	0.0	2.5
Oleic C18	2.0	3.0	7.0	3.0	11.0
Linoleic C18	—	—	3.0	—	5.5
Linolenic C18	—	—	—	—	—
APPROXIMATE CHEMICAL DATA	AAB	ABL	AB	ABH	AAAR
FFA	130-144	130-141	126-132	126-132	116-126
TITRE °C	37.0 Min.	38.0 Min.	24-28	29	30.0 Max.
IODINE VALUE	3.0 Max.	5.0 Max.	0-16	3.0 Max.	14-22
ACID VALUE	277-287	275-281	251-263	251-263	232-253
SAP. VALUE	277-287	275-281	251-263	251-263	232-253
COLOR	15.0/2.0	20.0/3.0	20.0/3.0	15.0/2.0	35.0/5.0

◀ Take LAURIC ACIDS, for instance

... notice the

- WIDE CHOICE
- OUTSTANDING QUALITY

Drew markets a variety of Lauric Acids, individually tailored to specific needs in the chemical, drug and cosmetic fields. Continual development of diversified physical properties makes it possible for you to select exactly the right Lauric Acid for your formula. And Drew's consistent uniform quality gives you a *plus* factor that means a head start for your product.

Write for booklet, "DREW FATTY ACIDS" and copy of Drew's new chart, "OILS AND FATS".

TECHNICAL PRODUCTS DIVISION  
**E. F. DREW & CO., Inc.**  
 15 East 26th Street, New York 10, N. Y.  
 CHICAGO      PHILADELPHIA      BOSTON



For Specialty Soap Making...

# SOLVAY CAUSTIC POTASH

SOLVAY CAUSTIC POTASH is particularly designed for specialty soap making. Although it is a top quality product of exceptional purity—low in iron and turbidity—it costs no more!

We invite you to make your own comparison tests. We shall be glad to supply samples and furnish technical assistance on application and uses of Solvay Caustic Potash.

## SOLVAY PROCESS DIVISION



ALLIED CHEMICAL & DYE CORPORATION  
61 Broadway, New York 6, N. Y.

### BRANCH SALES OFFICES:

Boston • Charlotte • Chicago • Cincinnati • Cleveland • Detroit • Houston  
New Orleans • New York • Philadelphia • Pittsburgh • St. Louis • Syracuse



## LOW IN IRON

and other impurities

### SOLVAY CAUSTIC POTASH

- 49-50% Liquid in Tank Cars
- 45% Liquid in Drums
- 90-92% Solid and Flake

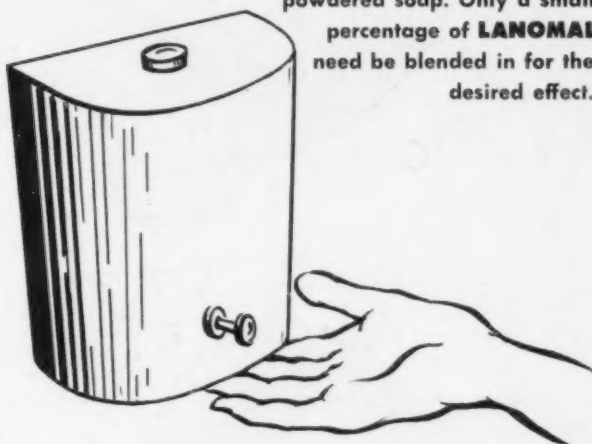
Soda Ash • Caustic Soda • Chlorine • Potassium Carbonate • Calcium Chloride • Caustic Potash • Sodium Bicarbonate • Ammonium Bicarbonate  
Cleaning Compounds • Sodium Nitrite • Para-dichlorobenzene • Ortho-dichlorobenzene • Monochlorobenzene • Ammonium Chloride • Snowflake® Crystals



## Add LANOLIN to POWDERED SOAPS with **LANOMAL®**

All the advantages of lanolin can now be added to your powdered products with newly perfected, free-flowing, micro-pulverized **LANOMAL**.

Through a process that has been successfully tested over the past two years, **LANOMAL** can now be evenly and uniformly sprayed or otherwise dispersed (even by simple tumbling) through your powdered soap. Only a small percentage of **LANOMAL** need be blended in for the desired effect.



**LANOMAL** is a saponified, almost white lanolin blended with a filler, and is of uniform screen size, passed through 20 mesh. Used in proper proportions, **LANOMAL** will meet present government specifications for lanolin-class detergents.

**LANOMAL** is stable and can be shipped under any conditions and stored for any reasonable length of time.

**LANOMAL** is ideal for your powdered soaps; send for a sample today and prove it.

### TYPICAL ANALYSIS (WHEN PACKED)

#### LANOMAL SOAP #1 (POWDERED)

Lanomal Soap #1 is a prepared free flowing powdered product manufactured by blending 25% of Bentonite with 75% of "Lanolin Soap", with the following typical analysis:

Moisture . . . . .	2.5%
Unsap. (Lanolin Alcohols) . . . . .	34.0%
Sodium Soap . . . . .	63.5%
Combined Sodium Oxide . . . . .	7.8%
Saponified Lanolin . . . . .	
Fatty Acids . . . . .	55.7%
Free Alkali . . . . .	None
Ph. of 5% aqueous solution . . . . .	9.5-10.0

Packing: 300# bbls. or fibre containers.

#### LANOMAL SOAP #2 (POWDERED)

Moisture . . . . .	1%
Unsap. (Lanolin Alcohols) . . . . .	5%
Sodium Soap . . . . .	94%
Combined Sodium Oxide . . . . .	11%
Saponified Lanolin . . . . .	
Fatty Acids . . . . .	85%
Free Alkali . . . . .	None
Ph. of 5% aqueous solution . . . . .	9.5-10.0

America's Largest Processor of Wool Fat and Lanolin  
147 Lombardy St., Brooklyn 22, N. Y.  
612 N. Michigan Ave., Chicago 11, Ill.



The perfume in a soap is there for but one purpose.... to increase consumer appeal. To accomplish this it must provide a fragrance which appeals to the market... it must influence the buyer at point of purchase, and last delightfully throughout the total use period.

The able soap perfumers of van Ameringen-Haebler, Inc. know soaps and know perfumes. They can give you soap perfumes that are technically right, and appealingly right.

**VAN AMERINGEN-HAEBLER, INC.**

521 WEST 57th STREET • NEW YORK 19, NEW YORK







**ALKALI BATH WITH DRESINATE.** Photographs above show (left to right) the first, seventeenth, eighteenth, nineteenth, and twentieth of twenty panels that were coated with petrolatum and consecutively immersed in a single Dresinate-alkali bath. Only the last three to be immersed show any evidence of oil. All others were cleaned thoroughly.

## OIL TESTS PROVE EXTRA ACTION OF DRESINATE®-FORTIFIED CLEANERS



**STANDARD ALKALI BATH (without Dresinate).** Photographs above show all of five panels that were coated with petrolatum in the same manner as the Dresinate-alkali panels, and immersed for the same time in a bath of standard alkali cleaner. Even the first to be immersed (at left) is badly soiled.

These tests on oiled steel panels demonstrate conclusively the better wetting and emulsifying properties of alkaline cleaning compounds that are fortified with Hercules Dresinate. Soil suspension properties also are improved. This assures thorough rinsing action and increases the life of the cleaning bath.

Dresinate—a series of powdered sodium resinsates and tallates—is equally effective in heavy-duty or mild alkaline baths. It is easy to handle, and uniform in quality.

In combination with the proper alkalies, Dresinate can be relied upon for safe as well as fast and thorough cleaning for any type of metal. It is available through leading distributors. If you cannot obtain Dresinate, write Hercules.



PMC Department—Industrial Chemicals  
**HERCULES POWDER COMPANY**  
INCORPORATED  
961 Market Street, Wilmington 99, Del.

Steel panels were cleaned thoroughly, soiled to the same degree with petrolatum, and immersed in the cleaning bath at 180° F. for 10 minutes. Compositions of compounds used in the two baths (8-oz./gal. solutions) are given below. On removal, the panels were immediately dipped into a clear-water bath at 180° F., and rinsed in the flow from a cold water tap at 60° F. Each panel went through three such cleaning cycles.

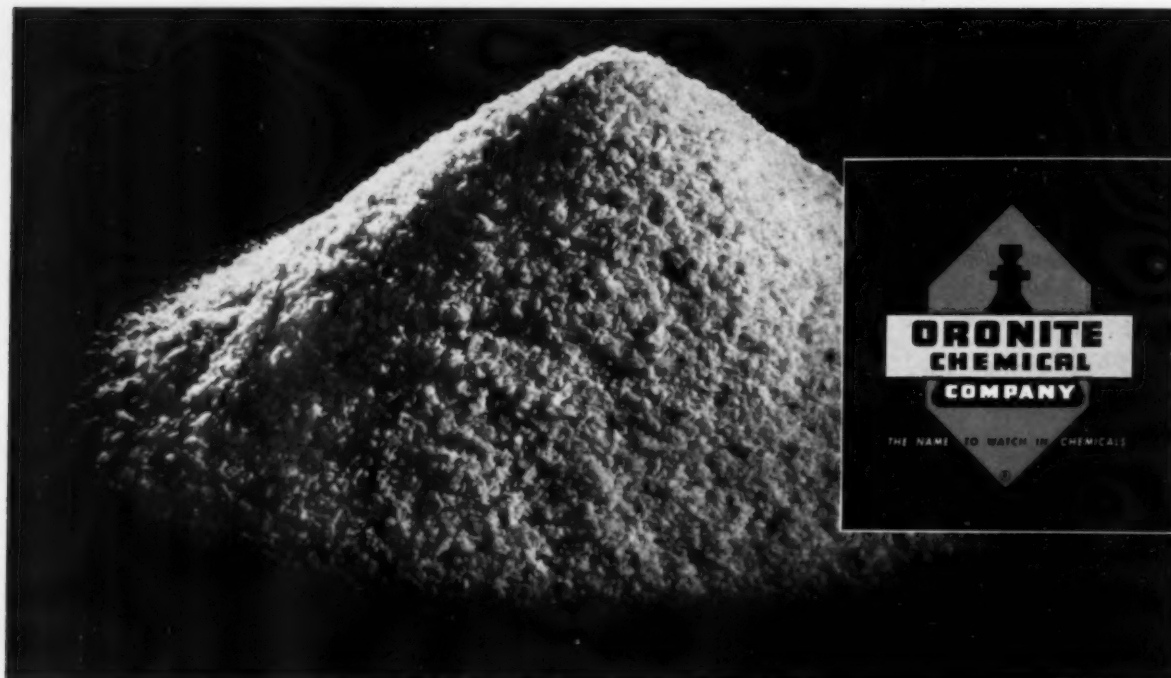
Material Used	Dresinate Cleaner	Standard Cleaner
Metasilicate ( $\text{Na}_2\text{SiO}_3 \cdot 5\text{H}_2\text{O}$ ) . . . .	46.0%	50%
Caustic ( $\text{NaOH}$ ) . . . . .	27.6%	30%
TSP ( $\text{Na}_3\text{PO}_4 \cdot 12\text{H}_2\text{O}$ ) . . . . .	18.4%	20%
Dresinate X . . . . .	8.0%	—
	100.0%	100%

**HERCULES®**  
**DRESINATE**

PD53-1

# Now! An even **BETTER** D-40

by the world's largest producer of synthetic detergent raw materials



Oronite, a pioneer and major producer of detergent raw materials, again leads the way with superior products. Compare improved D-40 for characteristics and performance—you'll agree there just isn't a better all-around product for repackaging or compounding. Our higher active

product D-60 is also better than ever.

Compounders of cleansers, bubble bath, laundry, dishwashing and car washing products will find D-40 produces better quality, more competitive branded products. Write the nearest Oronite office for complete information and product samples.

**BETTER** Odor...Extremely bland—almost odorless

**BETTER** Color...

A whiter white color

**BETTER** Caking Resistance...Flows more freely

**BETTER** Foam Stability...Greater resistance to de-foaming in presence of

grease **BETTER** Detergency...improved action on cotton and wool

D-40 is available in 3 particle sizes: D-40SF (Flakes) D-40 (Granules) D-40FG (Powder)

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MERCANTILE SECURITIES BLDG., DALLAS 1, TEXAS

2832



ALBERT VERLEY AND COMPANY

*Announces increased production and a  
reduced price—on the popular*

*Iso Jasmone Pure*

TURN THE PAGE



*Effects that conform with your highest standards*

*with important savings to you . . .*

*at the new low price of*

*Iso Jasmone Pure*

BY ALBERT VERLEY AND COMPANY

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ALBERT VERLEY AND CO., INC.  
222 Front St., East, Toronto, Ontario

*Representatives in all principal cities  
throughout the world.*

Iso Jasmone Pure is now available at only \$24.00 per pound — thanks to more economical production resulting from its great popularity and from reduced costs of raw materials.

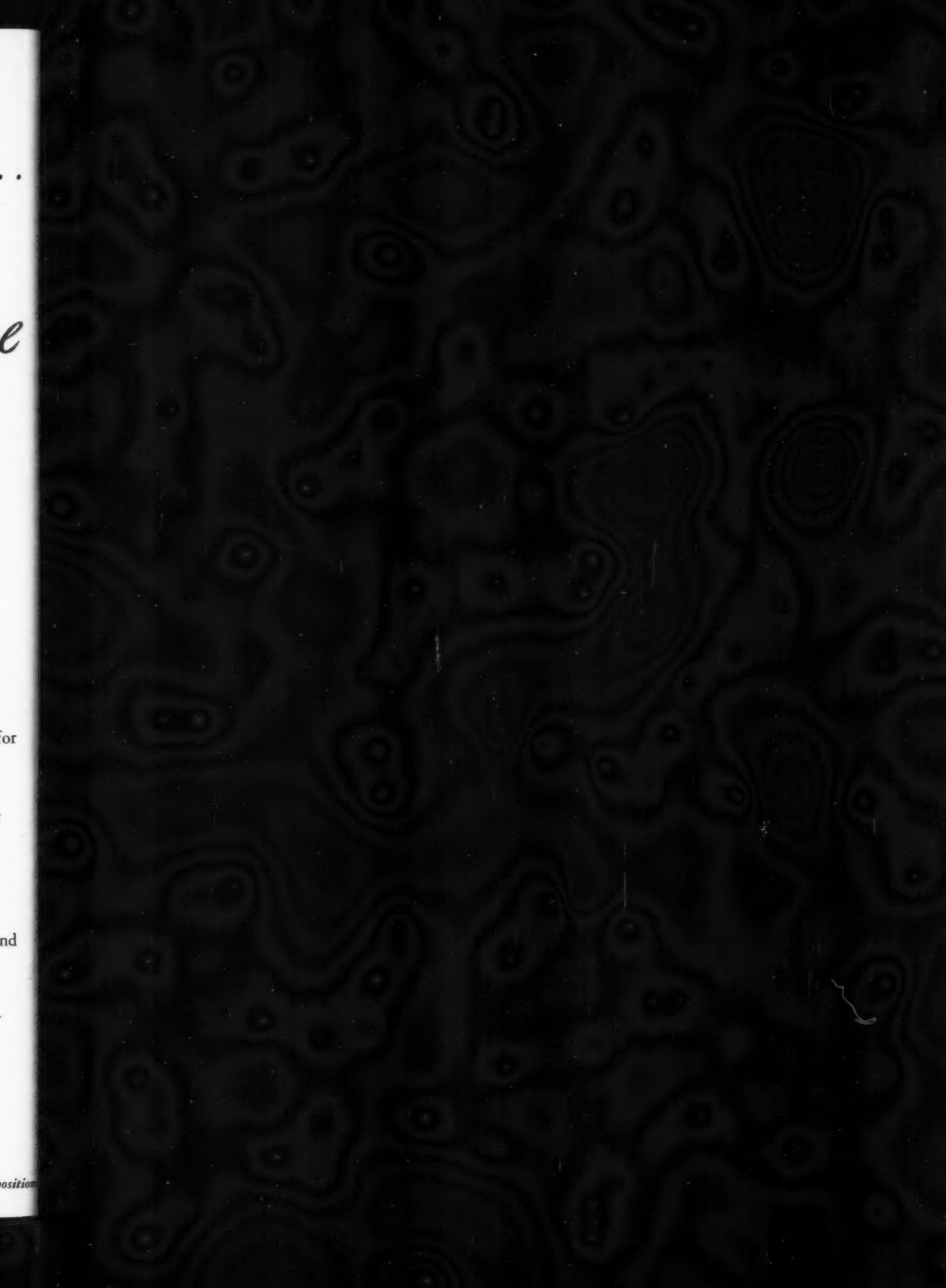
During the period of war shortages, when scarcity raised the price of the Absolute to fantastic heights, this synthesis of the Jasmin blossom made an undisputed place for itself as a veritable substitute for the natural flower in the finest compositions.

Now that the Absolute is again available, Iso Jasmone Pure continues to be a part of some of the principal formulas. It has made a permanent place for itself in the repertoire of leading perfumers.

At this new low cost, Iso Jasmone Pure is widely available as a substitute, in whole or in part, for the natural product — both in your Jasmin odors and for the Jasmin note which is so important in a wide variety of other perfume compositions, probably in some of yours. Write today for a working sample.







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# After Closing...

## Mathieson Acquires Powell

Sale of John Powell & Co., New York, and its subsidiaries to Mathieson Chemical Corp., Baltimore, was announced jointly May 1 by Thomas S. Nichols, president of Mathieson, and H. Alvin Smith, president of Powell. John Powell & Co. was founded in 1923 and produces basic pesticide formulations. The company has four grinding and mixing plants in Brooklyn, Atlanta, E. Omaha and Elkton, Md. Sales offices are located throughout the U. S. and a technical service laboratory was opened a year and a half ago at Port Jefferson, Long Island.

Mathieson, which recently acquired E. R. Squibb & Son, New York, has been manufacturing basic chemicals for insecticide and herbicide use. The management of Powell will continue as a part of the Mathieson organization.

## Johnson Appoints Emens

Robert J. Emens has recently been named north central regional sales manager of S. C. Johnson & Son, Inc., Racine, Wis., to succeed R. W. Griffith, who has been named Eastern regional manager.

## Fels Names Dr. Leaper

Appointment of Dr. P. J. Leaper as director of research and development was announced recently by Fels & Co., Philadelphia. Dr. Leaper, a graduate of the University of London in 1920, comes to Fels from Allied Chemical & Dye Corp., New York, where he served as manager of new product research in the general chemical division.

Dr. Leaper was employed as assistant manager of the fine organic chemicals division of Eastman Kodak Co., from 1924 to 1926. He became manager of the fine organic chemicals division of U. S. Rubber Co. in 1926

and remained there until he joined Allied Chemical & Dye Corp. in 1944. Dr. Leaper represented the U. S. Gov-



DR. P. J. LEAPER

ernment's chemical warfare service as a consultant during investigation of the German chemical industry in 1945, and performed the same service as an investigator under the Department of Commerce in 1947.

## Expands Aerosol Valve Use

Extension into the open market of a newly adapted "Pres-O" aerosol valve, was announced recently by Oil Equipment Laboratories, Elizabeth, N. J. Up until a short time ago, "Pres-O", was supplied exclusively to manufacturers in the insecticide and cosmetic fields. However, new features have been added to make it available

for other aerosol dispensed products.

"Pres-O" permits the loading of both product and propellant through the valve itself, without the need of refrigeration. The valve is non-clogging, the company says, and allows full control of the spray pattern. With the "Pres-O" valve are three new tops. "Tilt-Top", for foam, shaving cream, etc., operated by tilting the package and applying light finger pressure which deflects the spout. "Touch-Top", operated by finger pressure on the crest, for cosmetics, hair lacquers, insecticides, etc. "Twis-Top", adaptable for either spray or foam, is of one-piece construction, with no overcap. All three can be used on any package suitable for pressurized dispensing.

## Official Test Insecticide

Official Test Insecticide for the years 1953 and 1954 is now available for shipment, it was announced recently by the Chemical Specialties Manufacturers Assn. Prices remain the same as previous "OTT": Members \$6.00 per dozen bottles; non-members \$7.00 per dozen bottles. "OTT" is packed six six-ounce bottles to a corrugated carton. Orders for "OTT" should be sent to CSMA, Suite 814, 110 East 42nd St., New York.

## New Hollingshead Plant

R. M. Hollingshead Corp., Camden, N. J., recently announced plans to erect a \$750,000 plant for the manufacture of chemical products in Sunnyvale, Calif. The new plant will produce chemical maintenance products and will serve 11 western

Three new aerosol valves of Oil Equipment Laboratories, Elizabeth, N. J.



states. The new factory, situated on a 10-acre tract, is scheduled for completion in early 1954.

### New Guardian Specialties

Two new products: "Floroxin", a foot bath powder designed to control athlete's foot, and "Petsol", a cat and dog soap powder, were introduced recently by Guardian Corp., New York. The two new chemical specialties include a chemical base claimed to combine disinfectant, detergent, and deodorant properties. The base is a modified, buffered hypochlorous acid, registered under the trademark "Clorpactin".

Other uses for the base material include detergents, tooth powders, shampoos, etc., Alfred R. Globus, president of the firm announced. Franchise agreements are currently being negotiated with other firms. The base material is a white powder that comes in 28 grades. WCS is the grade used for "Floroxin" and "Petsol". A report of U. S. Testing Co., Hoboken, N. J., indicated that the WCS or pharmaceutical grade, has a phenol coefficient of 111.1.

"Floroxin" and "Petsol" are to be handled by brokers or jobbers, according to William T. Hopkins, sales manager. The foot bath powder is first appearing in Mobile, Ala.; New Orleans; Dallas and Houston, and is expected to be introduced to most areas east of the Mississippi by August. "Petsol", the pet cleanser, is slated for distribution through the same channels in New England.

### Ion Exchange Book

*Ion Exchangers in Analytical Chemistry* by Olof Samuelson, John Wiley & Sons, New York, and Almqvist & Wiksell, Stockholm, 291 pages, 9½ x 6 inches, cloth, price \$6.50. The introduction preceding the text outlines the history of ion exchangers, and the scope of the ion exchange method and of ion exchange chromatography. The text consists of three parts: The general part describes fundamental properties of ion exchange resins, ion exchange equilibria, ion exchange kinetics, and ion exchange in column operation. The second, prac-



R. M. Hollingshead III (seated left), a director of R. M. Hollingshead Corp., Camden, N. J., with William S. Romano, Atherton realtor, for the purchase of 10 acre site in Sunnyvale, Calif. Standing, l. to r., Leon M. Wheatley, assistant to the president of Hollingshead; Raymond Reeves, vice-president, San Francisco Bay Council, Inc.; Edwin W. Randle, Atherton realtor and Harry R. Smith, vice-president, Bank of America.

tical part consists of a detailed treatment of techniques of ion exchange separations for analytical purposes and the technique of ion exchange chromatography. The third and major part of the text, entitled applications deals with practical applications of the ion exchange method in inorganic, organic, and biochemical analysis. Each chapter is followed by a bibliography.

### Revise Roach Spray Test

Recommendation that CSMA adopt a changed version of the liquid roach spray test, as published in 1946, was made by the Insecticide Scientific Committee, at a recent meeting of the CSMA Board of Governors, held at the Hotel Roosevelt, New York. The committee stated that the earlier version of the spray test was a tentative method, and suggested the corrected

method as the CSMA official method of testing roach sprays.

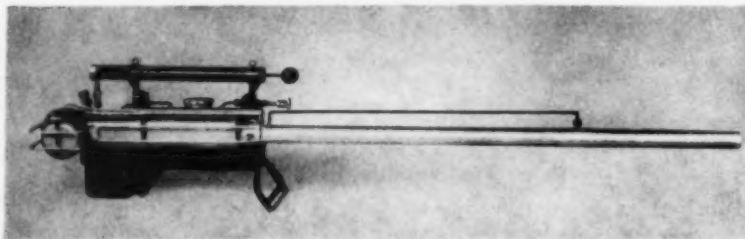
### Special EQ-53 Calif. Label

Packages of EQ-53 moth-proofer must bear the poison label with skull and crossbones and antidote, according to a recent ruling by the state of California. This requirement is based on California legislation which declares that all solutions containing over five percent DDT are required to be labeled in this manner. This type of label must be submitted to secure registration.

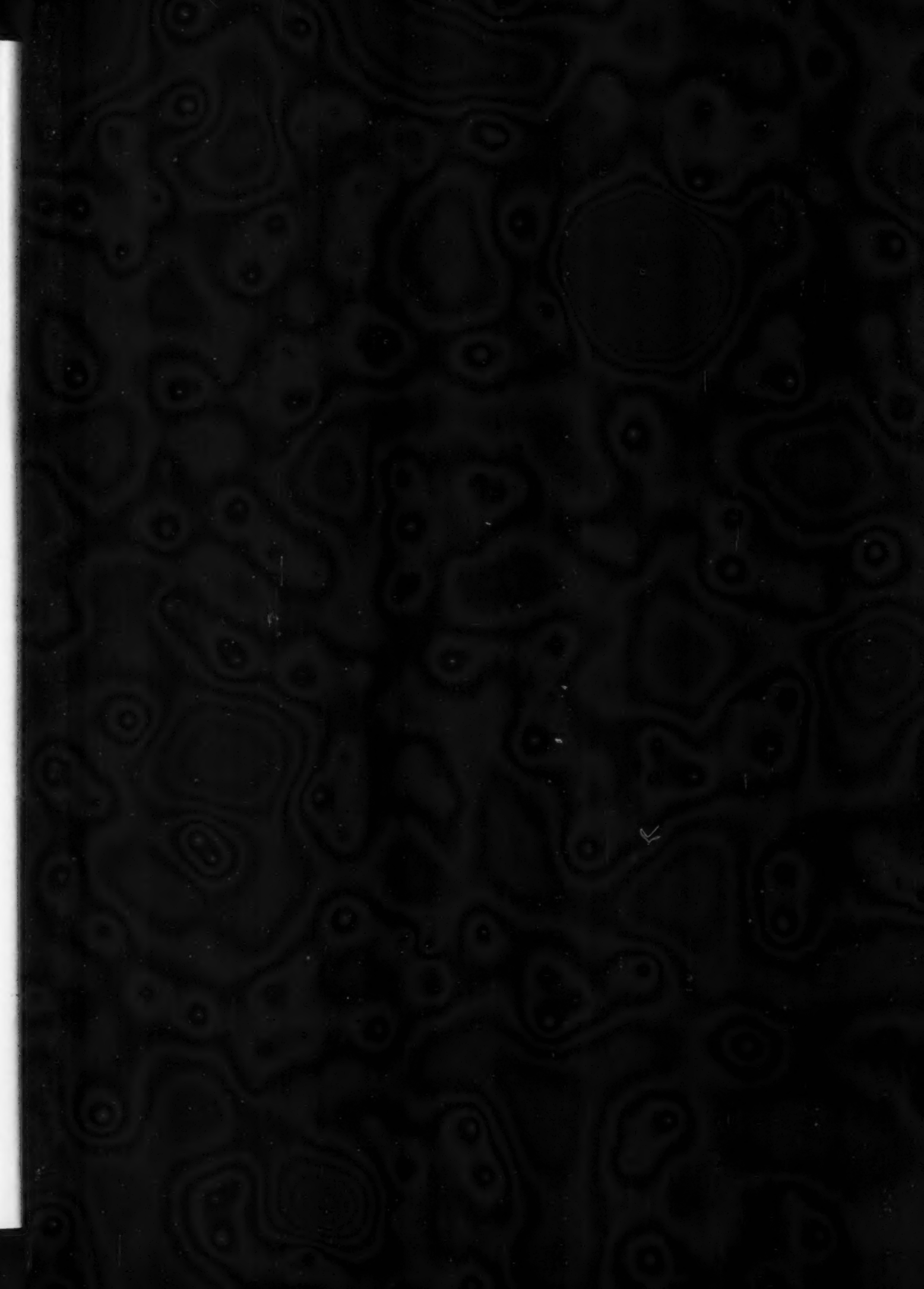
### Zonite Profits Up

Zonite Products Corp., New York, and subsidiaries, recently reported for 1952 a net profit of \$289,067, equal to 35 cents a common share, compared with \$240,204 or 29 cents.

New "Swingfog" portable insecticide spray gun, which atomizes a pesticide or fumigant into a dense clinging vapor. Made by Devenco, Inc., New York, apparatus consists of pulse-jet heater, fuel tank, hand air pump, pesticide or fumigant tank and a long, rifle-like exhaust tube. The heater generates an exhaust stream through the tube.











## The headache that was nailed to a tree

Fewer years back than you might imagine, our ancestors had the idea that a tree could accommodate them by taking over a headache.

The technique was simple. The sufferer wrapped a lock of his hair around a nail and whacked it into the most convenient timber.

Unitol, the refined tall oil, is a forest product that does a more scientific job of relieving mental strain.

This superior tall oil costs substantially less than the components it replaces. It is easier to use, definitely simplifies and cuts the cost of processing. Always in supply, it ends inventory problems, reduces concern about possible market fluctuations.

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# Waxes A, B, C and D get the "Brush-Off" in this test!



## Only WHIZ Triple Service Self-Polishing Wax has both Water Resistance and Removability

**WATER RESISTANCE** saves your customers money because it means protection against "tracked-in" moisture, plus long wear and low-cost maintenance by "damp mopping." **EASE OF REMOVABILITY** cuts wax "stripping" time and prevents hard-to-remove wax build-up. In the standard "brush machine" test, WHIZ Triple Service Wax was the only one of five nationally sold and nationally advertised waxes to stand out in both qualities.



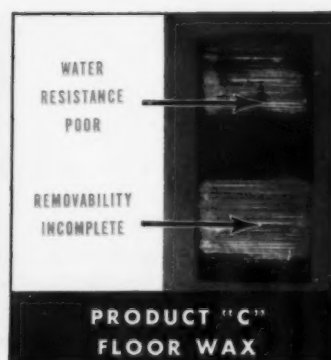
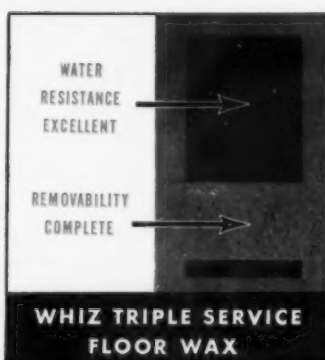
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Industrial Division

**R. M. Hollingshead Corporation**

LEADER IN MAINTENANCE CHEMICALS  
840 Cooper Street, Camden 2, N. J.



**Tests show TRIPLE SERVICE Superiority**—TEST PANELS from the "Scrubbing Machine" show where Triple Service Wax excels. When scrubbed with plain water in the **WATER RESISTANCE** test (equal to 50 damp moppings), it did not come off and did not lose gloss; when scrubbed with soap in the **REMOVABILITY** test, Triple Service came off completely. **PRODUCT "C"** failed the test, as did the other samples tested. It had little resistance to plain water, yet was not completely removed by soap solution.

### LAB-TESTED, FIELD-TESTED— BEST QUALITY EVER IN THE LOW PRICE RANGE

- Packaged in 1, 5 and 55-gal. containers
- Available for private label
- Write for prices

You've got a great sales story when you sell Triple Service Wax! Write for more details!



When a man will choose it and use it



## Norda helps

A man likes the toilet things he uses to smell good, but not to smell pretty. When he buys his shaving creams, soaps, shaving lotions—and all his other own bathroom-cabinet supplies—his choices go to the quality odors and perfumes.

There's a very good reason why. The quality odors are subtle; the quality scents don't shout. They please, but they don't persist. They set a man up in private, but they don't tell the public about it.

It takes skill to create perfume compounds

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Norda was the first to point out that good scents are selling scents that make perfumed items pay. Send for samples that will prove it.

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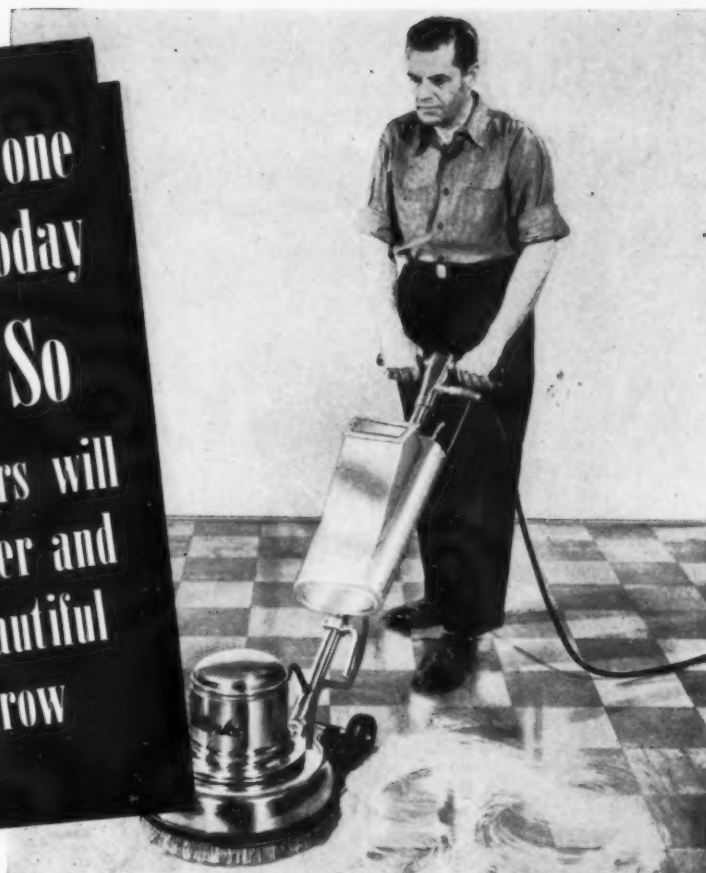


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Cleaner Today**

**So  
Your Floors will  
be brighter and  
more Beautiful  
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Deep Tone Cleaner softens even the hardest water making it naturally soft. This product cleans your floors and leaves them soft, pliable, bright, shiny as well as

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This photo of a foaming test clearly shows the superior foaming power of Santomerse No. 1 over other products.

If you want more sudsing from your formulation try this effective wetting agent. It will give you these other sales-building advantages, too:

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**Greater Detergency** . . . Santomerse No. 1 is readily soluble and offers improved detergency in either hard or soft water.

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Mr. fatty acid says:

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**HONEST VALUE** in  
soap-making acids?"

You'll get  
more for  
your money  
in . . .

# ADM Vegetable fatty acids

LINSEED — SOYA — CORN — CORN-SOYA — COCONUT

*A complete line for quality soaps at all price levels*

The truly smart and successful buyer—and especially the buyer of chemicals—knows that there are many elements in a "bargain." Most important, we believe, is the assurance of *getting what you order*.

As we all know, this is a special problem in buying fatty acids for soap-making. For even slight variations in raw materials and processing can impair the purity of acids—and their uniformity—and their titre, color and saponification characteristics.

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are well aware that high quality is *unvarying* in these products. The reasons include such factors as our unmatched plant facilities, production control, and others. The results include superb clarity in liquid soaps . . . purity in the highest degree . . . and a minimum content of unsaponifiables.

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X100 Enlargement

### STRONG

NACCONOL DB does not tend to break down during mechanical mixing.

### BULKY

NACCONOL DB, pound for pound, bulks up better, helps you deliver loose, free-flowing mixtures now in demand.

### DUST FREE

Free from dust when made, NACCONOL DB remains dust free in your mixtures.

### FREE FLOWING

Nothing rolls like a ball—and no other form of synthetic detergent flows as freely as NACCONOL DB.

### UNIFORM

Photomicrograph confirms what you instantly recognize by trickling a handful thru your fingers: NACCONOL DB is remarkably uniform.

ready for Action in your mixtures

# Nacconol<sup>®</sup>

## DB

Dense Beads

AMERICA'S LEADING SYNTHETIC DETERGENT

There's nothing quite like a better product in a buyer's market. And there's nothing like NACCONOL DB to put new sales-appeal in your mixtures.

Millions of perfectly-formed spheres in every pound of NACCONOL DB produce a dustless, free-flowing, 'bulky' mixture so much in demand today. These uniform beads are made exclusively in specially-designed equipment in our Buffalo plant. Use them in your mixtures and keep a step ahead of your competitors. Act now on the offer at the left.

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*between the pitch  
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It takes more than a song to sell soap...between the studio and our housewife's kitchen lie years of market analysis and chemical research; for developing soaps and synthetic detergents that make her job easier is essentially a chemical process.

Closely associated with the soap industry for 60 years, Mathieson was one of America's earliest producers of chemicals used to manufacture soap. And here's *our* pitch: today Mathieson is the only pro-

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### MATHIESON CHEMICAL CORPORATION

Mathieson Industrial Chemicals Division  
Baltimore 3, Maryland

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# SWEEP DUST FROM AIR-FURNITURE-FLOORS

with entirely different SANITREET--the anti-static,  
non-oily dust absorber mist that can't burn!



- CLEANS THE AIR
- CLEANS THE SURFACE
- FRESHENS THE ATMOSPHERE

● New principle . . . new product!

Dust particles are suspended in the air by their lightness and static charges.

Spray the SANITREET Dust Absorber Mist lightly throughout the air. Its penetrating and anti-static action speeds settling of airborne dust particles.

The atmosphere instantly becomes refreshingly pleasant.

Floors are thoroughly cleansed of all settled dust when swept with the SANITREETed dust mop or yarn brush.

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Air and surfaces remain clean and fresh longer.

Safe to use! Will not burn. Contains no animal, mineral, vegetable oils or wax. It will not stain . . . for SANITREET Dust Absorber Mist is soluble in water.

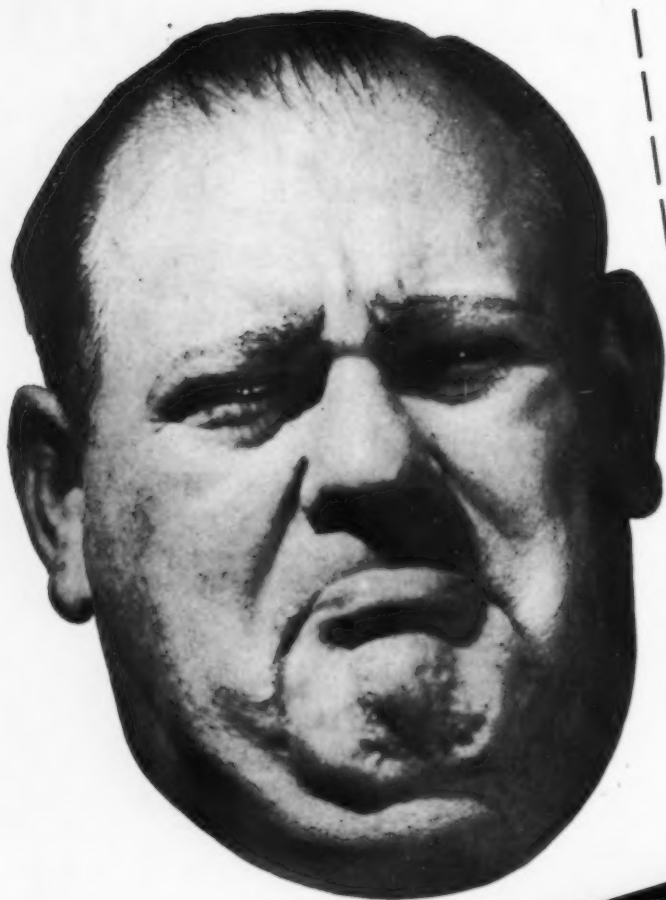
Spray  
dust out of  
the air

Spray  
yarn brush or  
dust mop

Spray  
dust cloth

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OF BALTIMORE, INC.**

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they  
know..."*

**"WHEN IT SMELLS BETTER—IT WILL SELL BETTER!"**

Felton chemists, with a wealth of research and experience in Industrial Aromatics and Deodorizing Agents, can supply you with the perfect reodorants or neutralizers for your products. All you have to do is send us a sample of what you make—so that we can make careful, individualized study of your requirements.

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#### **Powdered Dial**

Perfect for compounding hand soaps or repackaging as is for immediate dispenser use, Powdered Dial is Armour's famous Hexachlorophene bath and toilet soap in powdered form. Remember, Hexachlorophene is the first germicidal agent ever found that keeps its antiseptic power in soap. It's one of the big selling points that makes products compounded with powdered Dial so popular with industrial users and institutions.

#### **Arconomy Powder**

Made from the same fine soap base as Dial, Arconomy offers you all of Dial's advantages *without* Hexachlorophene. Arconomy is made with 20% coconut oil, instead of the usual 5 to 15%, assuring fast and copious suds. 92% soap—or better—Arconomy is perfect for compounding your own powdered hand soaps, or repackaging for dispenser use without change.

#### **DO-ALL Synthetic Detergent**

A versatile all-purpose anionic detergent with high suds stability, DO-ALL is a synthetic with builders already added. It can be used as is for hand dishwashing, maintenance, rug cleaning and other applications. You can also use it as a base for compounding other, more specialized products. A fluffy, pure white, spray-dried sudsing product, DO-ALL has high profit possibilities for the converter.

#### **Formula #99 Liquid Antiseptic Soap**

For liquid soap dispensers in factories, hospitals, etc., Formula #99 Liquid Antiseptic Soap provides Hexachlorophene protection. It has great profit potential because of industry's acceptance of this protection. Regular daily use of Formula #99 can help cut absenteeism by keeping the skin clear of bacteria that can aggravate any small cut or abrasion into a case of dermatitis. Formula #99 Antiseptic Soap is available in either 20% or Concentrate form, both containing 5% Hexachlorophene based on soap content.

From the most complete  
line of soaps and  
synthetics available any-  
where, here are four  
products whose

**HIGH QUALITY**

**MEANS**

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For the complete story  
on these and our  
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Covering the formulation, raw materials, and general discussion of synthetic detergents, foaming, wetting, emulsification, dispersion a practical volume for every chemist or plant man interested in detergents . . . 435 pages . . . \$7.10 in U.S.A.; \$7.60 elsewhere.

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*...on High Gloss!*  
*...on Durability!*



# SAF-FLOR

*... a new anti-slip floor wax*

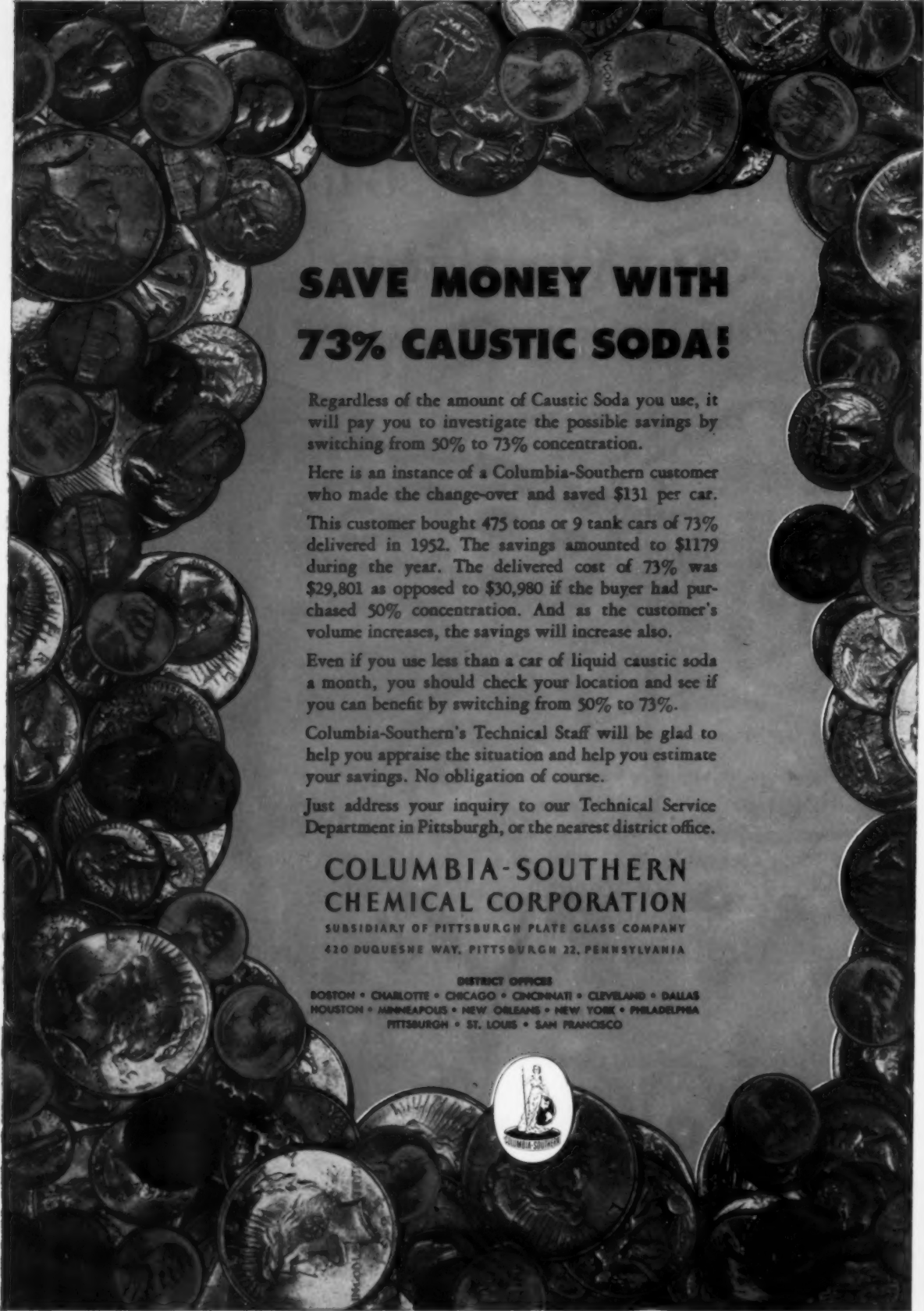
Have you tested a sample of this new anti-slip, high-gloss floor wax? If not, let us send you a sample today!

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A stylized, abstract illustration of a man in a graduation cap and gown. The man's face is a simple, elongated shape with large, round eyes and a small, curved mouth. He is wearing a dark graduation cap with a tassel and a dark gown with a white shirt and a dark bow tie. He is holding a long, thin diploma or stick in his right hand and a large, stylized fork in his left hand. The background is white with some faint, abstract lines and shapes. The text "What" and "what" is visible in the upper right corner.

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# K R A N I C H

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Liquid Castile Soap Shampoo  
Liquid Coconut Oil Soap Shampoo  
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(50% Olive Oil Base)

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# K R A N I C H    S O A P S

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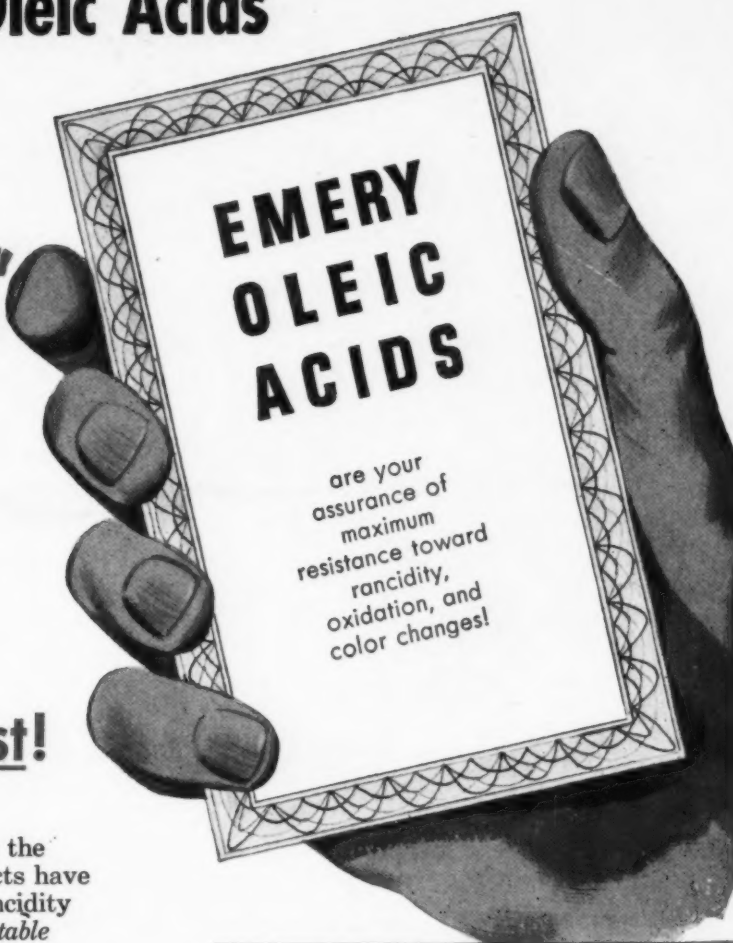
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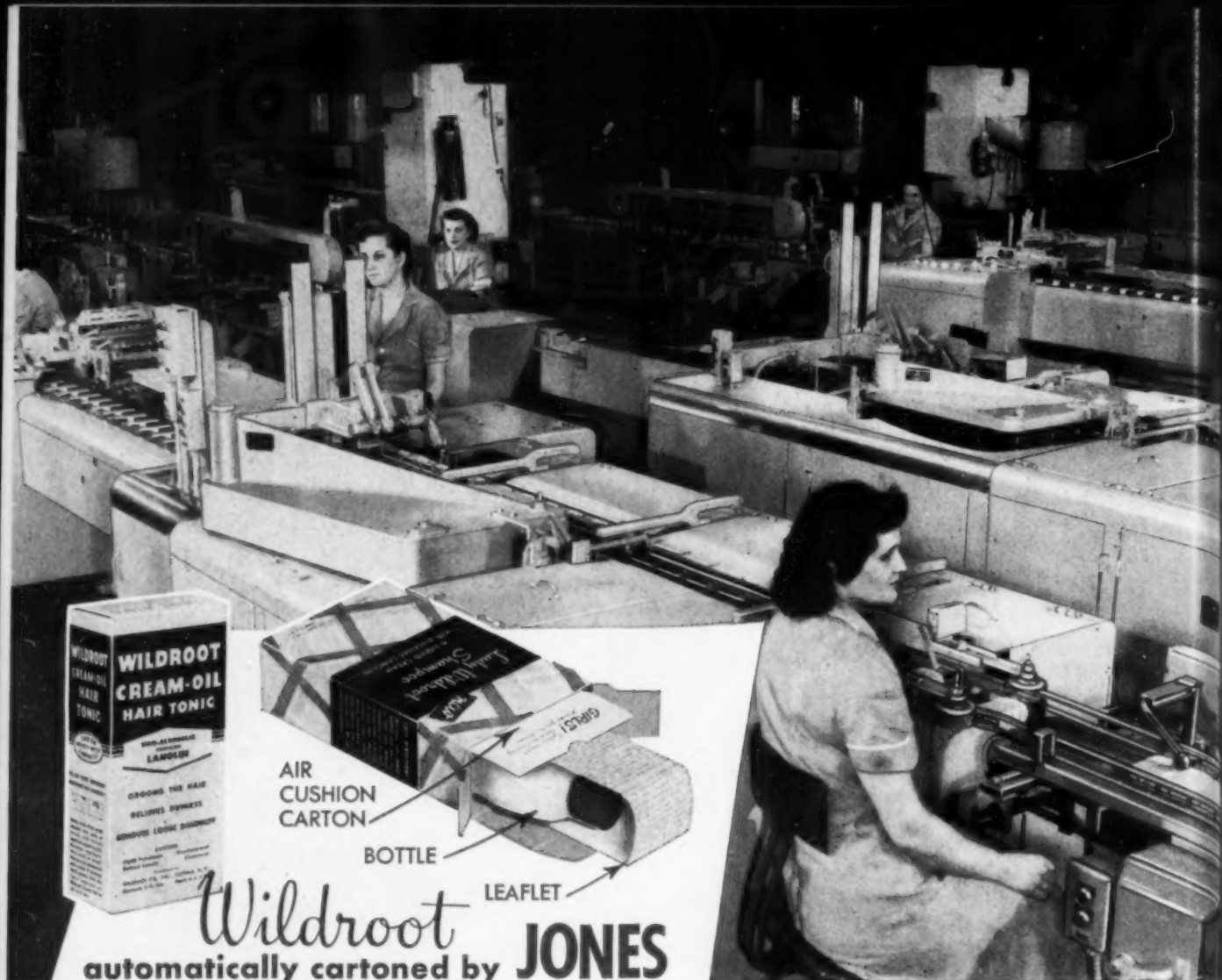
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To satisfy the steadily increasing demand for Wildroot products, three Jones Fully Automatic Cartoners were selected for Wildroot's high speed lines. Each cartoner handles six sizes of bottles and cartons, plus leaflet, at speeds up to 160 per minute. Wide range and flexibility provide the invaluable assurance that new sizes and new products can be added at any time.

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These features and many others have prompted a majority of successful, cost-conscious manufacturers to select the Jones Constant Motion Cartoner. They know that only the *finest cartoning machine* will give them the *lowest cartoning cost*.

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*Cartoning Machines - Soap Presses*

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## ... in brief

**I** SOAP COSTS . . . The cost of putting a package of finished soap or detergent into the hands of the consumer, whether industrial or household user, today seems to bear little relationship to the cost of the raw materials involved. Overhead, sales and distribution costs have continued to mount so rapidly since the end of the war that they overshadow raw material costs. Once it was that when the tallow and grease markets dropped, proportionate adjustments in prices for certain standard soaps were almost automatic. But, no more. Those days seem gone forever.

Naturally, prices for soaps and detergents still go up and down. However, a far wider drop in raw materials is needed today to bring an appreciable decline in finished soaps than that of yesterday. How much does it cost to ship ten barrels of soap powder to an industrial user or a truckload of packaged soap to a wholesale grocer fifty miles away? How much does it cost per call for salesmen to visit these people and get the orders? These, and not the price of tallow or coconut fatty acids, have become the burning questions. These are what make it tougher and tougher to do business at a profit.

For years, we have heard speakers everywhere talk about the need for cheaper distribution of everything. But, like the weather, if anybody has done anything about it, results appear to be conspicuous by their absence. Maybe the ever tightening pinch of the shoe is going to force us to do something about it.

**I** FLOOR WAX RULES . . . The overtime session held by the Federal Trade Commission in Washington last month to consider a third set of proposed trade practice rules for the floor wax industry seemed to indicate one thing. Industry and the F.T.C. are

getting closer to agreement on a set of rules for the industry. Many floor wax makers now seem to feel that they can live with the rules if the F.T.C. eliminates rule 2, which is a performance specification, the paragraph on loading and the test for water resistance in rule 7. Since the Commission seems interested in setting up a set of workable trade practice rules for floor wax products, and has spent nearly five years on the effort, we believe it would do well to accept the suggestion of the industry on these three points. The present industry stand of acceptance of the proposed rules minus the three unworkable sections represents a substantial compromise from its original position of complete objection to any rules.

**I** AEROSOL CONTEST . . . Come next December at the 40th annual meeting of the Chemical Specialties Manufacturers Association in Washington and the members of its Aerosol Division again plan to stage their second annual "aerosol festival" replete with a display and selection of the best packages in various classes. With the multiplicity of new aerosols which have come on the market, the competition for best packages should be really red hot. One of the disconcerting features of this plan, however, is that three or more persons are going to be asked to stick their necks away out and act as judges in the contest. Their safest procedure, we suggest, would be to view the exhibits, leave town immediately, and notify the committee of their selections by mail.

Even at this early date, we urge that the "aerosol festival" be publicized chiefly in the trade press whence there may come some commercial benefits to the entrants and winners. And we urge that the committee eschew the newspapers, and likewise a Miss Fly Killer of 1953. Let's make it a trade show for the trade. Honestly, the pub-



lic doesn't give a hoot about aerosol contest winners, but those in and around the trade are deeply interested, financially and otherwise. So, if you have an entry for 1953, begin to think about it now.

●  
**L** EQ-53 RASH . . . The anticipated rash of new EQ-53 products has broken out, more or less as predicted. If we may judge by a quick observation, everybody and his Uncle Charley seem to be climbing on the band wagon. Some marketers are in it for a quick buck as usual. Others have climbed aboard, not by choice, but mainly as a defensive move. If this material is going to knock the moth products market on its proverbial ear, and steal all the business away from the old-line products, they do not plan to be left out of the picture.

We fear that some of our old friends in the chemical specialty business who have joined this lengthening parade may find that when the total business is divided up, their share is not as large as they expected. As we mentioned previously, EQ-53 has marked limitations in use. With the fact that it is excellent for the purpose for which it was designed, there is no quarrel. But what part of the market does that comprise? We imagine that we would find out before going overboard marketwise.

●  
**L** VAPORIZERS . . . For those who recently have put out insecticide vaporizers for home use, and for those who may be anticipating doing this, we quote from a release by the Interdepartmental Committee on Pest Control following a meeting of that committee in Washington on March 27 last: "Because of the health hazard inherent in the misuse of insecticide vaporizers as so-called fumigators, . . . the committee . . . recommends against their use in living quarters."

The term "living quarters," means the home, anywhere in the home as we interpret it. And the word, "misuse," emphasizes the aspect of human carelessness or ignorance, both not uncommon. The meaning which the committee obviously intends to convey is quite clear, "don't sell vaporizers for home use." Although the committee merely "recommends against their use," it has the powers to go much further if its recommendations are not heeded.

**L** WEED KILLERS . . . That new weed control chemicals have been a boon to agriculture in recent years, there is little doubt. But the benefits of these products go further, even though agriculture is and will continue to be their chief market. Railroads have been users of weed and brush killers for years. Now, it seems, industry generally is beginning to discover them in an expanding way as practical protection against weed and grass fire hazards, for aid in insect control, appearance, etc.

Marketers of sanitary chemicals and allied specialties have now discovered that here is a field which might be cultivated and expanded, that there are a hundred uses around factories, lumber camps, institutions, resorts, and even the home which have yet to be exploited. Off hand, we should say the market is worth going after. Some sanitary supply houses have sold weed control chemicals for years. Others, it would seem, are just now discovering the market. We would not be surprised to see a rash of new brands of industrial weed killers in the near future.

●  
**L** ABOUT FACE . . . The recent speech of Sinclair Weeks, Secretary of Commerce, in which he assured industry that peace in Korea need not knock things into a cocked hat, was reassuring. Unless we miss our guess, this is about the first time in twenty years where a Secretary of Commerce has made a flat, open gesture intended to help and reassure American business. We were reminded of the days when Herbert Hoover was Commerce Secretary and when business and industry were not looked upon as something of vultures and necessary evils by government.

Evidently, Secretary Weeks intends to make the Department of Commerce what it was always supposed to be, an institution to aid and encourage American industry and commerce. For twenty years or more, it has not fallen exactly in this category. It has not been a strong or helpful agency to business, but obviously innocuous. We respectfully suggest to the Secretary that he return to the type of department built by Mr. Hoover, and especially as far as chemicals are concerned that he rebuild a strong centralized division of real value to all parts of the American industry it is supposed to serve.



## Wrong First

Editor:

I always get a kick out of your "Tale Ends" in SOAP Magazine. In the April issue you refer to the Thor Corp., whose washing machines store up the old water and soap for re-use. Just to set the record straight, this is not new as you mention, for General Electric's automatic washing machines, for at least three years, have had a similar arrangement whereby the rinse water is saved with, of course, the soap that is rinsed out of the clothes, for re-use.

I just thought I'd mention this to you so that you don't have the General Electric people on your neck in case they see this article giving the "first" to one of their worthy competitors.

Robert A. Engel  
Trubek Laboratories  
East Rutherford, N. J.

*We stand corrected on the "first" part. On our comments about saving soap, the cheapest item in the American household budget, we stand*

*our ground. Thank you, Mr. Engel.*  
—Ed.

## Licensed Products

Editor:

As manufacturers of soaps and allied chemicals, we are desirous of manufacturing such articles under license from manufacturers in your country. We are also prepared to receive products in bulk, semi-processed or fully processed, and repack for selling in small retail units. A separate department of ours produces cartons of all kinds which means that there would be no difficulty in obtaining suitable containers. The products which we specifically have in mind are synthetic detergents and sanitary products.

We would esteem it a favor if you could advise us how best to get in touch with firms who would consider our suggestions. If you could bring our request to the notice of the trade, we would prefer at this stage that the name of our firm be not disclosed. We are one of the oldest estab-

lished manufacturers in this country and have been in existence since 1888.

F.G.C.L.

South Africa

\* \* \*

*We shall be glad to forward correspondence to this subscriber in South Africa who asks that his name be not divulged at this time. In order to facilitate forwarding, we suggest that Box No. 746 be used to identify correspondence.*—Ed.

## Envies Five Percenters

Editor:

I read with much interest your editorial, "Dog Fight", in the March issue of *Soap and Sanitary Chemicals* commenting on a recent analysis of the soap market in the U. K. Would you be so kind as to send me a copy of that document or advise me where it can be procured.

Lucky fellows those U.K. manufacturers with "only five percent" profit on turnover. If they were here, they would have to operate on three percent margin. Government ruling, you know.

J. J. Gallegos  
Caribbean Products Co., Ltd.  
Kingston, Jamaica, B.W.I.

\* \* \*

*Our editorial was based on an article in the "Financial Times" of London, from which publication, we believe, the analysis may be obtained.*  
—Ed.

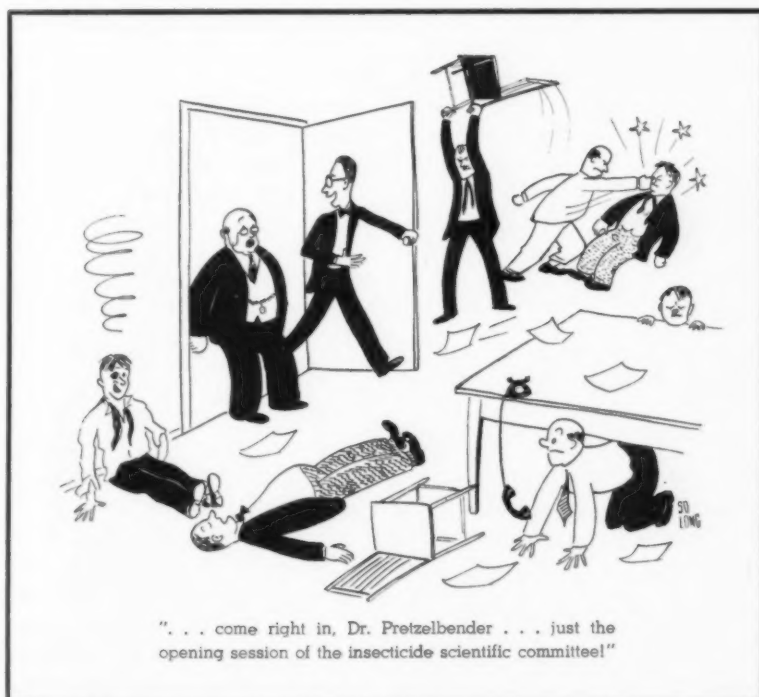
## Mr. Poland Responds

Editor:

You asked for the next round, so here it is. I stand on my record which is not shown by the shavings. I still do not fear the influence of big business although it always has been my conviction that any business, including soap, would like to have a complete monopoly. I have made that statement many times in a number of places.

Government restrictions of free flow of business have never been satisfactory to me. I willingly accepted the restrictions on me in the last war, and lived up to them carefully. However, I continued to live in hopes that the

(Turn to Page 81)



# TALL OIL...

**Volume now estimated at 50 million pounds annually for soap use alone**

**T**ALL oil is a natural mixture of rosin acids related to abietic acids and of fatty acids related to oleic acid together with non-acidic bodies. It is the product of the acidification of the skimmings from the black liquor of the alkaline paper pulp industry.

Tall oil is a relatively new industrial oil. Its domestic production and uses have increased steadily since its commercial introduction in 1930.

This oil is an important ingredient in many soap products and while extensive uses have developed in other fields such as drying oils, soap products continue to consume a large portion of the tall oil supply.

The total amount of tall oil made into soap products is not easy to estimate. During 1951 over 22 million pounds of tall oil were reported manufactured into products classified as soap by the Bureau of the Census. Since the field of soap products can be considered more broadly and many products such as mineral oil emulsions, soluble oils, cutting oils, textile oils, asphalt emulsions, flotation reagents and many other specialty products using soap—and often, tall oil soaps—are not always included in soap, it is easy to see why such an estimate is difficult.

The total of all tall oil manufactured into soap products is believed by some authorities to exceed fifty million pounds annually.

The use of tall oil in soaps has

\* Dr. Pollak, who is also technical consultant to the Tall Oil Association, was assisted in the preparation of this paper by M. G. Bestul and R. W. Gressang of the development department of West Virginia Pulp and Paper Co., Charleston, South Carolina.

increased over a period of comparatively few years to approximately 25 percent of the total fatty acids used. Largely responsible for this increased use is the impetus that came during the early 1940's when a critical shortage of vegetable and animal fats occurred. During that period tall oil was first used as a substitute product. With greater know-how and new technical development its use increased considerably. The easing of vegetable and animal fat shortages after World War II did not lessen its popularity with soapers to any degree. The reason for this is its consistently low price, its varying rosin acids content, its varying degree of refinement and its abundance of supply as a valuable soap raw material.

## **Advantages in Soaps**

**T**ALL oil shares many of the advantages of other fatty acids in soap making. Like other fatty acids tall oil is preferred to fats and oils in the manufacture of numerous soap products because it simplifies processing. Tall oil reacts completely and immediately on contact with alkalis to form soaps. Neither boiling nor excess alkali is needed to complete the reaction.

Soaps of any desired neutrality or alkalinity, within the limits of the alkali used, can be made. There is no need for any purification steps such as salting out or graining out processes. There is no glycerine or impurities to be removed and consequently no shrinkage need be allowed for. This means that only the simplest equipment and no special skill is needed. Wages for labor and steam costs are

SOAP and SANITARY CHEMICALS

**By Dr. Arthur Pollak\***  
Technical Consultant  
New York

held to a minimum. In most cases buying tall oil and enough caustic soda, potash, or other alkalis to saponify it proves much cheaper even than buying soap ready made. It is often easier to make a soap solution by pumping and stirring tall oil, water and alkali together in a tank, than by handling granulated or flake soap and dissolving it in water.

Tall oil also has special advantages over the more saturated fatty acids. Its soaps are much more soluble in water than those of tallow or coconut oil, notably at low temperature. This is especially true of soda soaps. Thus, in some instances, soap product formulas requiring potash soaps of stearic, lauric or palmitic fatty acids because of their greater solubility can be adjusted to sodium soaps and tall oil. There is thus a double saving; lower cost fatty acids and lower cost alkali. Soaps made with tall oil are generally of a lower viscosity than those made using more saturated acids. This is also true of oil emulsions using tall oil soaps as dispersing agents. Often blends of tall oil with the more saturated fatty acids combine the best features of each to yield products of improved stability and surface activity. Where expensive alkalis such as triethanolamine or morpholine are used the comparatively low acid numbers of tall oil offer savings of 10 percent or more of the alkali.

Since he first started using tall oil as a raw material the soap maker has found that the high percentage of unsaturated groups in tall oil and its low titre have a tendency to increase the affinity towards mineral oil as well as aliphatic and aromatic compounds. Rosin acids in soap increase its affinity

toward mineral oil as do the sterols which are present. By taking advantage of these rosin acids in soap, low water solubility is effected unless water softeners are added. The lack of suds in this case can be overcome by adding such products as "Nullapon B,"\*\* Sequestrene A\*\*\* and tetrasodium pyrophosphate, silicates or similar products. These softeners diminish the forces existing among the surface particles in water, lowering the interfacial or surface tension. Surface tension is low in dilute tall oil soap solutions. This gives tall oil soaps the ability to form a colloidal suspension. It is this suspension that absorbs and swallows up the dirt particles making them easier to rinse away. Grease, oil and similar products undergo emulsification and wash away as small droplets encased in portions of soap solutions which act as protective colloids. This makes tall oil soaps popular for the degreasing of engines, for the cleaning of asphalt tile and linoleum and for the degreasing of metal prior to plating.

Tall oil soaps have good cleaning properties. They are used in industrial laundries, for wool scouring in the textile industry, for brown bar laundry soaps, for spray dried, powdered or bead soaps in scrub, paste or liquid hand soaps and for cleaning and degreasing zinc, aluminum, tin, brass, copper and steel before plating.

Tall oil soaps also are used in emulsifiable disinfectants, coal tar disinfectants, amine emulsions, sulfonated oils, insecticides, plant sprays and cattle dips.

Soaps of tall oil for convenience

\* Antara Chemicals Div., General Dyestuff Corp., New York.

\*\* Alrose Chemical Co., Providence, R. I.

may be divided into the following categories: hard soaps, jelly soaps, liquid soaps, soap powders, disinfectants, and miscellaneous soap products.

Representative formulas of each type are given below. Where a crude or whole tall oil is specified caustic requirements are based on a tall oil acid number of 160; where distilled tall oil is used an acid value of 185 is assumed. Acid refined tall oils may be used interchangeably in these formulas provided allowance is made for the acid value difference.

#### Hard Soaps

**A** TYPICAL formula and procedure for preparing a hard or bar soap containing tall oil is as follows:

	Pounds
Tall oil (crude).....	127
Beef tallow (42-48 titer).....	380
Caustic soda (98%).....	69
Sodium metasilicate .....	120
Water .....	304
	<hr/> 1000

1. Add beef tallow to kettle and heat to about 150°F.
2. Dissolve caustic soda in 250 lbs. of the water and add to the tallow with agitation.
3. Boil tallow and caustic until resultant soap has begun to set up.
4. Add tall oil which has been previously heated to about 150°F and agitate until uniform.
5. Dissolve sodium metasilicate in remaining water, add to kettle and agitate until a creamy viscous paste is obtained.
6. Pour into molds and allow to harden.

For improved color and odor, refined or distilled tall oil may be used by merely adjusting the caustic for the particular acid number of the tall oil used.

Another formula for a typical stock for hard soap is as follows:



	Percent
Tallow .....	75
Coconut oil .....	10
Distilled tall oil .....	15

The tall oil and tallow are charged into the kettle. After heating sufficiently, caustic soda is added and the mixture boiled. The coconut oil is added and the kettle finished off at a free alkali content of 0.25 percent expressed as sodium oxide. After washing, the free alkali should drop to about 0.18 percent. The soap is allowed to settle for one day, and at pumping, the soap should have a free alkali content of about 0.10 percent and about 32-35 percent moisture. After drying, the soap should have about 13 percent moisture. Bar soaps may be perfumed as desired.

### Jelly Soaps

**P**ASTE or jelly soaps are prepared very simply with tall oil. Depending on the consistency desired various percentages of soap may be present up to approximately 80 percent.

A typical formula and procedure for preparing a jelly soap from distilled tall oil is as follows:

	Pounds
Distilled tall oil .....	413
Potassium hydroxide (87%) ..	87
Water .....	500
	1000

1. Heat the distilled tall oil to about 175°F.
2. Dissolve the potassium hydroxide in the total amount of water and heat to 175°F.
3. Slowly pour the hot alkali solution into the tall oil with slow agitation. Mechanical agitator should operate at slow speeds and should be well submerged to prevent entrainment of air.
4. Continue agitation until uniform.

The above formulation may be perfumed with standard soap perfumes if desired to give a pleasing odor.

### Liquid Soaps

#### 15% Liquid Soap

A formula and procedure for the manufacture of a 15 percent liquid soap to meet Federal Specification P-S-618a is as follows:

	Pounds
Distilled tall oil .....	137
Potassium hydroxide (85.7%) ..	30
Synthetic B-79 .....	5
Sodium acetate .....	20
Water .....	808
	1000

The potassium hydroxide is dissolved in the total water to be used followed by the Synthetic B-79, a product of the Hercules

Powder Company, and the sodium acetate. The tall oil is then stirred in and agitation continued until a clear solution is formed. It is advisable to carry out the additions at about 140°F.

Liquid soaps of almost any concentration up to 50 percent may be prepared using the above procedure by varying the amounts of alkali used corresponding to the amount of tall oil used.

#### Liquid Scrub Soaps

A typical formula and procedure for preparing a liquid scrub soap is as follows:

	Pounds
Whole tall oil .....	200
Caustic soda (50%) .....	60
Pine Oil .....	200
Trisodium phosphate .....	40
Water .....	500
	1000

Add the whole tall oil, water, and pine oil together in a suitable vessel and heat to 150°F with agitation. Add caustic soda and TSP and continue agitation until a clear homogeneous solution is formed.

### Soap Powders

**S**OAP powders of many different formulas may be prepared from tall oil. Currently the most interesting of these are ones in which no reaction between the tall oil and alkali occurs until the mixture is added to water. These formulas are simple to prepare, but care must be taken that the soap powders are not exposed to moisture until ready for use.

A typical formula for a powdered soap using a distilled tall oil is as follows:

	Pounds
Distilled tall oil .....	93
Soda Ash .....	600
Kreelon CD .....	100
Sodium tripolyphosphate .....	207
	1000

The powdered soap is prepared by mixing all the dry ingredients thoroughly, then adding the distilled tall oil and mixing to obtain a homogeneous material. The most convenient method for adding the tall oil would be to spray it into the mixer with the dry ingredients. If desired the product may be perfumed to give a pleasing odor. Kreelon CD is a product of the Wyandotte Chemicals Corporation and is a combination of 95% Kreelon 4D and 5% Carbose D containing a minimum of 38% alkyl aryl sulfonate and 3.2% carboxymethyl-cellulose.

The above formulation is well suited to automatic washing machines and is unique in that it is simple to prepare and brings out the valuable properties of both a soap and a synthetic detergent.

Another formula which is suitable for commercial laundry application prepared from whole tall oil is as follows:

	Pounds
Whole tall oil .....	70
Pine oil .....	70
Soda ash .....	350
Caustic soda (flake) .....	80
Sodium metasilicate .....	80
Bentonite .....	350
	1000

Mix whole tall oil and pine oil together until a clear homogeneous solution is obtained. Add the tall oil-pine oil mixture to the other ingredients which have previously been dry-mixed together. Keep product dry since no reaction occurs until water is added.

Many formulas for powders may be prepared from tall oil by using various combinations of soap builders to produce the properties desired.

### Disinfectants

**D**ISINFECTANTS are divided into two categories, coal tar and pine oil, for convenience. Disinfectant formulations prepared from coal tar vary considerably with the source and strength of the coal tar acids used; hence, variations in formulas are necessary for the best results. A few typical formulas are given below.

#### FORMULA #1

	Pounds
Coal tar acids (25-28%) .....	205
Whole tall oil (high rosin content) .....	70
Sodium hydroxide (30%) .....	28
Water .....	5

Heat the tall oil with 40 lbs. of the tar acid to 90°C with agitation until a clear homogeneous solution is formed. Add the caustic soda solution and water and stir for about 10 minutes at 85-90°C. Add the balance of the tar acids and stir until a uniform product is obtained.

#### FORMULA #2

	Pounds
Coal tar acids (40%) .....	780
Whole tall oil .....	159
Sodium hydroxide (50%) .....	46
Water .....	15
	1000

Heat the tall oil and coal tar acids together with agitation to 90°C until a clear homogeneous mixture is formed. Slowly add the caustic soda solution and water to the tar acid-tall oil mixture. Continue agitation until a clear homogeneous solution is formed.

Pine oil disinfectants are readily made with tall oil. These may be prepared in various concentrations of pine oil dependent on the purpose.



**FORMULA #1**

	Pounds
Pine Oil .....	282
Whole tall oil.....	366
Potassium hydroxide (86%)..	70
Water .....	282
	1000

Heat the tall oil and pine oil together with agitation to about 150°F until a homogeneous mixture is formed. Dissolve the potassium hydroxide in the total amount of water and add this to the tall oil-pine oil mixture. Continue agitation until a uniform product is obtained (15-30 minutes).

The above formula is an emulsifier concentrate which can be diluted with pine oil (20 parts concentrate to 80 parts pine oil) to form a clear product which when added to water will produce a milky white emulsion.

**FORMULA #2**

	Pounds
Pine oil .....	750
Whole or distilled tall oil..	150
Caustic soda, flake.....	18
Water .....	82
	1000

Heat the pine oil and tall oil with agitation to about 150°-170°F. Dissolve the caustic soda in the water and add to the pine oil-tall oil mixture. Stir until a clear homogeneous product is formed.

**Miscellaneous Soap Products****Dry Cleaning Soap**

	Pounds
Tall oil, crude.....	537
Butyl cellosolve .....	135
Cleaners naphtha .....	126
Triethanolamine .....	91
Potassium hydroxide, 87%..	43
Water: .....	60
	1000

The tall oil, butyl cellosolve, and naphtha are thoroughly mixed and heated to 140°F. In a separate container the potassium hydroxide is dissolved in the water and mixed with the triethanolamine. This is then poured into the tall oil solution until the mixture becomes clear.

**Grease Cleaning Compound**

The following formula for grease cleaning compound has been designed to meet BuShips Specification 51065.

	Pounds
Distilled tall oil.....	95
#2 Fuel Oil.....	460
Pine oil .....	323
Sodium chromate .....	8
Potassium hydroxide (86%)..	20
Water .....	97
	1000

Mix the tall oil, fuel oil, and pine oil in a suitable container with an agitator until a clear solution is formed. Dissolve the potassium hydroxide in about 50 lbs. of water and add to the tall oil-pine oil-fuel oil mixture. Dissolve the sodium chromate in the remaining water and add to the total mixture. Continue agitation until a clear solution is obtained.

**Solvent Emulsion Cleaner**

A formula which may be diluted with kerosene is a ratio of up to one part cleaner to 15 parts kerosene and applied to soiled objects and finally removed by rinsing with water is covered by U. S. Patent 2,374,113.

The formula is as follows:

	Pounds
Distilled tall oil.....	462
Triethanolamine .....	88
Potash, 50% .....	235
Ethylene glycol monobutyl- ether .....	142
Pine Oil .....	73
	1000

**Metal Stripping Compound**

A formula for a metal stripping compound with a cresol base is as follows:

Cresol .....	62.4
Distilled tall oil.....	25.0
Potassium hydroxide (87%)..	5.5
Water .....	8.0

The tall oil is mixed with about half the required amount of cresol. The potassium hydroxide is dissolved in the water and added to the cresol-tall oil mixture. This is then agitated thoroughly at room temperature after which the remaining cresol is added and agitation continued for an additional five minutes.

**Tall Oil in Insecticides**

**A**GRICULTURAL and insecticide spray manufacturers have used tall oil as the insecticide sticker. In some sprays, tall oil is used as an adhesive. Generally the product is used as delivered in such formulations. Sometimes it is necessary to saponify a portion of the tall oil with caustic soda leaving some of the tall oil in the natural state for the adhesive. This makes it a combined emulsifying and adhesive agent. A solution of tall oil, plus tobacco extract, nicotine or petroleum solvents with suitable stabilizer is used to combat insects and other plant parasites.

Sodium, potassium, ammonium and complex salts of tall oil are basic materials for the manufacture of disinfectants. These products are made by the addition to soap solutions of cresol and other materials with a high phenol coefficient. Cleaners with disinfectant properties can be made from tar acid oils using tall oil soaps as the emulsifying agent. Stable or semi-stable emulsions may be produced by diluting stock solution with water.

In manufacturing disinfectants

emulsions are made of tar acids or tar acid oils with liquid sodium resinate (tall oil soap) obtained from sulfate black liquor.

Fungicides can be made from the metallic soaps of tall oil. These are readily decomposed by the acids liberated during fungus growth processes, freeing metal ions. One advantage of the metallic soaps of tall oil in fungicide applications is their water insolubility. Copper and zinc soaps are most frequently used in this application, with the copper reported to be about five times as effective as the zinc. The products are used to treat cloth, rope, concrete and wood. Mildewproof cloth has been produced from the copper soap.

Most of the water insoluble soaps find use in the paint and varnish field as dryers. The fungicidal properties of the copper soaps plus their solubility in petroleum thinners make them especially suitable for use in paints for coating ship bottoms. According to C. B. M. Young, George H. Eick and William Warmack of National Southern Products Corporation, "Tall oil is the cheapest source of fatty acids in the world. Because of this it has proved to be a very useful raw material to the soap maker. Physically it is different today from the oil marketed at the beginning of the war. Through a wide research and development program since the war's end, refined tall oils are now non-crystallizing, light in color, less odoriferous and more uniform in consistency from tank car to tank car. Present research calls for the elimination of all of the sulfur compounds and removal of the color bodies to make it more stable and attractive to the insecticide and disinfectant industry. It takes a higher temperature and longer time to saponify completely the rosin acids in tall oil after the fatty acids have been saponified. This precaution eliminates the stickiness, a frequent complaint encountered whenever tall oil soap products are prepared for the first time.

**References**

Wheeler, Dr. D. H. "Progress Thru Research." General Mills Corp., Minne-  
(Turn to Page 81)

# Soap and

was 77 years (range 53-90 years). Patients suffering from cerebral, endocrine or skin diseases, and individuals treated with hormone preparations or with drugs affecting the involuntary nervous system were not included in the study.

The 25 subjects were divided into two groups. Group one consisted of six men and seven women (mean age 78 years) and group two of six men and six women (mean age 76 years). After an initial determination had been made of the 24 hour lipid secretion in each of the individuals, the persons in group one were given bars of soap for washing, and subjects in group two bars of a detergent of similar shape, size and appearance. The soap bar was a milled bar typical of leading toilet soaps ("Camay"); the synthetic bar consisted of a mixture of sodium alkyl sulfates and inorganic salts, mostly sodium sulfate. A trace of perfume, and a very small amount of unsulfated long chain alcohols were also present.

After a period of four weeks the preparations used by the two groups were interchanged and the study continued for another four weeks, the persons in group one now using detergent bars, and in group two soap bars. It was ascertained through direct supervision by the division's research nurse that the inmates actually used the distributed bars for all washing purposes and not the ordinary soap bars of the hospital. No attempt was made to enforce a definite number of washings, but it was controlled that the subjects washed their hands at least once daily.

Determinations of the 24 hour skin lipid secretion were performed at intervals of one week, using the procedure described below. The amount of soap and of detergent used by the individuals during the last four week period was estimated by weighing each bar at the beginning and end of this period. Close range photographs of the



**I**N A previous investigation by one of the authors (1) the sebaceous secretion on the dorsal region of the hand was found to be very small, averaging only about 13 micrograms in 24 hours per sq. cm. of skin in the distal part of this region. The present study was undertaken with the purpose of investigating over a relatively long experimental period the effect, if any, of washing with soap and with detergent on the 24 hour skin lipid secretion in the dorsal region of the hand.

It was realized during the planning of this study that the dorsal region of the hand would not be the most suitable skin area for an investigation of the general effect of soap and of detergent on the skin lipid secretion. Thus the amounts of lipid secreted per sq. cm. in this region are

close to the lower limit of the quantities that can be determined with reasonable accuracy, and for the same reason the demonstration of an eventual reduction in the lipid secretion following the use of soap or of detergent might prove difficult. The decision to perform the study on the hands was motivated by the practical significance of information pertaining to the surface lipids in this skin region.

#### Plan of Investigation

**T**HE subjects included in the investigation were elderly individuals who were inmates of the St. Louis City Infirmary Hospital. Out of a larger group of patients 25 were selected, 12 men and 13 women, who proved to be both reliable and cooperative. The mean age of the subjects

# the Skin

By Svend G. Johnsen and John Esben Kirk\*

skin on the dorsal aspect of the hands were made before the onset of the study and after four and eight weeks.

## Technique

**F**OR collection and analysis of the lipids the technique used was essentially that described by Kirk (2) and by Kvorning (5). Some improvements in the collection procedure, as introduced by Johnsen (1), were employed, however, for the purpose of avoiding contact with the skin area under investigation and contamination from adjacent regions during the 24 hour secretion test.

*Preliminary removal of surface lipids.* At the beginning of the experiment the surface lipids were removed quantitatively from a four sq. cm. circular area in the distal part of the second intermetacarpal space (between the extensor tendons to the second and third finger). A glass cylinder with cut edges was employed to delimit this region and two portions of five ml. redistilled ethyl ether successively poured into the cylinder and removed by suction. The skin area deprived of surface lipids was then covered with a perforated celluloid hemisphere prepared by cutting a table tennis ball into halves. The hemisphere was attached to the skin by means of adhesive tape and the subject instructed to avoid contact of the hand with water.

*Collection of lipids secreted in a 24 hour period.* After 24 hours the

celluloid hemisphere was removed and a smaller glass cylinder with a two sq. cm. opening applied to the center of the previously defatted larger area. The lipids from the two sq. cm. area were then collected quantitatively by two successive additions of five ml. portions of redistilled ethyl ether, which were each left in contact with the skin surface for one minute. The ether portions were transferred by suction from the cylinder to a carefully cleaned glass tube using an all glass suction apparatus. It was confirmed in experiments with colored ether that no leakage occurred under the edge of the small cylinder.

*Isolation and analysis of the lipids.* For isolation of the skin lipids the procedure described by Kirk, Page and Van Slyke (3) was used. The ethyl ether was evaporated below 60°C and the lipids in the residue redissolved in redistilled petroleum ether. The petroleum ether was subsequently passed through a sintered glass filter and made up to 10 ml. volume. The lipid determination was made on a 4.5 ml. aliquot using the gasometric carbon method of Van Slyke, Page and Kirk (7) with the factors given for mixed plasma lipids. The accuracy of the gasometric method is about 0.5 per cent in analysis of lipid samples containing 0.2 - 0.6 mg. of carbon. With the small amounts of lipids encountered in the present study an accuracy of about 10-15 per cent could be expected; such accuracy was actually found by the authors in duplicate analyses.

*Blank value.* Because of the small amounts of lipids present in the samples the greatest care was exercised to keep the blank value of the analysis as low and as constant as possible. Reagents of the highest purity were used for preparation of the combustion fluid, and only carbonate free distilled water employed for rinsing of the combustion tubes. Blank determinations on the combustion procedure were performed at least once daily. On several occasions blanks were run on the whole procedure; in these latter blank determinations two five ml. ether portions were applied to a skin area from which the skin surface lipids had been collected immediately before, and these ether samples were subsequently carried through all the stages of the procedure. The values found were only slightly higher than the blank values for the combustion alone, and never exceeded the latter by more than two micrograms of lipid per sample.

Since washing of the skin with soap and subsequent rinsing with water has been found by Kvorning (6) to leave petroleum ether soluble material on the skin surface in amounts of about 60 to 70 micrograms per sq. cm., the starting of the secretion periods with such high initial lipid values would lead to erroneous results. It was ascertained in a few experiments by the present authors that washing of the hands with soap and water similarly would leave considerable amounts of petroleum ether soluble substance on the skin surface of the back of the hands (several times more than the amount secreted by the sebaceous glands in this region in 24 hours). For this reason the complete preliminary removal of the surface lipids with ether, as employed by Kirk (2, 4) and by Kvorning (5) in their four hour secretion experiments was used in the 24 hour secretion studies in the present investigation.

The results of the 24 hour skin

## Effect of soap and detergent on the skin lipid secretion in dorsal region of the hand

\* From the Division of Gerontology, Washington University School of Medicine, and the St. Louis City Infirmary Hospital, St. Louis, Missouri.



lipid determinations in groups 1 and 2 are presented in Tables 1 and 2. The tables contain besides the initial secretion values for each individual the secretion figures observed in the weekly tests. It will be seen that the values recorded for the same individual frequently vary notably from week to week even in periods in which the same preparation was used for hand washing.

The data for group 1 (Table 1) show a mean initial 24 hour secretion value of 13 micrograms of lipid per sq. cm. of skin. In the following four weeks of hand washing with soap the average value was found to decrease to 11, 11, 10 and eight micrograms per sq. cm., respectively, the mean of the 52 secretion tests being 9.7 micrograms per sq. cm.

After the soap had been substituted with bars of detergent the weekly mean secretion values observed were nine, nine, eight and four micrograms per sq. cm. (mean of 52 tests 7.4 micrograms per sq. cm.).

Group 2 showed a mean initial secretion value of 11 micrograms per sq. cm. (Table 2). The values observed during the first four weeks, when the detergent was used for hand washing, were nine, seven, six and 10 micrograms per sq. cm., respectively (average value for the 48 determinations 8.2 micrograms). During the second four week period, in which soap was used, the mean values for the group were six, 13, 10 and eight micrograms per sq. cm. (average of the 48 determinations 9.3 micrograms).

Thus in both group one and group two a somewhat lower sebaceous secretion was found with the detergent than when the soap was used for hand washing. The differences are not great, however, especially when compared with the variation in lipid secretion observed in the individual subjects from week to week, and are not statistically significant. These findings do not exclude, of course, the possibility that a significant effect on the lipid secretion may be demonstrable in skin regions possessing a higher level of sebaceous secretion.

In both groups a fall in sebaceous secretion was noted from the test performed before the onset of the investigation and the first test conducted during controlled hand washing. This finding may possibly be explained by an increase in the frequency of hand washing following the institution of supervision by the research nurse. In connection with this it should be mentioned that lower mean values for the sebaceous secretion were observed with increasing consumption of soap and detergent. The trend in the individual subjects was not uniform, however, and a statistical analysis revealed that the correlation between the amount of washing preparation used and the 24 hour sebaceous secretion values was not significant.

No irritation of the skin was observed in the aged persons during the eight week experiment, and comparison of the three sets of photographs obtained in each of the subjects likewise failed to indicate any change in the appearance of the skin.

#### Summary

A STUDY was made in 25 elderly individuals of the effect of hand washing with soap and with a detergent on the 24 hour sebaceous secretion in an area on the dorsal region of the hand. The experiment with each preparation lasted four weeks. No statistically significant effect of either the soap or the detergent on the lipid secretion in this skin region was found.

(Turn to Page 114)

Table 1.

The effect of hand washing with soap and with a detergent on the 24 hour sebaceous secretion in the individuals in group 1

		Micrograms of lipid per sq. cm. per 24 hours										Mean of both Periods	Grams of deter- gent used daily	
		Period 1, Soap Week No.					Period 2, Detergent Week No.							
Age	Sex	Initial value	1	2	3	4	Mean	1	2	3	4			Mean
85	F	9	8	0	0	10	5	0	7	8	9	6	5	3.8
71	F	6	12	18	3	16	12	14	5	14	0	8	10	2.9
71	F	9	10	7	15	7	10	3	11	0	1	4	7	1.0
75	F	11	14	16	11	10	13	10	6	12	0	7	10	0.7
87	F	16	16	10	2	7	9	8	10	6	4	7	8	2.7
85	F	14	16	3	15	3	9	20	12	5	4	10	10	3.6
87	F	17	2	14	5	7	7	19	10	7	0	9	8	1.5
66	M	20	20	0	12	0	8	8	12	2	8	8	8	1.1
87	M	10	11	13	21	5	13	0	3	0	0	1	7	4.7
74	M	11	1	0	7	5	3	0	6	6	0	3	3	1.7
84	M	9	10	20	9	14	13	7	0	0	2	2	8	2.8
70	M	23	22	30	17	17	21	22	22	36	24	26	24	0.5
67	M	9	5	0	10	0	4	10	9	0	3	6	5	2.7
Mean		13	11	11	10	8	9.7	9	9	8	4	7.4	8.6	

Table 2.

The effect of hand washing with a detergent and with soap on the 24 hour sebaceous secretion in the individuals in group 2

Age	Sex	Initial value	Micrograms of lipid per sq. cm. per 24 hours										Mean Grams of both Periods	Grams of Soap used daily
			Period 1. Detergent Week No.					Period 2. Soap Week No.						
			1	2	3	4	Mean	1	2	3	4	Mean		
75	F	12	16	0	11	6	8	0	20	12	2	9	8	1.5
87	F	15	9	4	7	3	6	11	27	16	13	17	11	2.3
53	F	14	2	11	8	0	5	4	0	11	0	4	5	3.6
83	F	13	8	24	4	21	14	8	17	10	25	15	15	2.0
85	F	10	15	0	0	9	6	7	12	14	8	10	8	1.5
80	F	8	4	3	7	14	7	4	12	11	6	8	8	2.0
65	M	4	10	0	8	5	6	0	18	5	0	6	6	1.9
90	M	16	9	11	14	6	10	0	18	5	0	6	8	1.2
58	M	19	16	10	16	26	17	23	17	13	8	15	16	1.3
69	M	12	5	0	0	13	5	3	6	3	4	4	4	0.8
80	M	7	9	15	2	8	9	3	0	17	3	6	7	1.8
79	M	4	2	11	0	12	6	10	4	7	30	13	10	0.7
Mean		11	9	7	6	10	8.2	6	13	10	8	9.3	8.8	





A. B. Riddiford, extreme left, one of the three Riddiford brothers who founded the business, still continues with the firm as a

salesman. He is in his eighties. With Mr. Riddiford is Charles E. Doyle president. At right are members of the sales staff.

## Riddiford Bros., Chicago

**R**IDDIFORD BROS., Inc., which is widely recognized as one of the larger distributors of sanitary supplies in the middle west, rounded out 69 years of business operations in Chicago on Feb. 1 of this year. From the beginning, back in 1884, the company has built and maintained an enviable reputation for integrity, quality merchandise and service. The value of these attributes to Riddiford Bros. is eloquently attested to by the fact that many of the firm's customers have been on the Riddiford books for 50 to 60 years.

When, for instance, Potter Palmer, years ago, built the first famous Chicago hotel bearing his name at State and Monroe Streets, he came to Riddiford Bros. in search of the right kind of floor scrubbing compound to keep his barber shop floor bright and shining—that floor which attained world-wide notoriety because of the big silver dollars sunk in the tiling. Today's new and modern Palmer House on the same site, now a unit of the far flung Hilton hotel chain, is still a patron of Riddiford Bros.

Railroads, too, which began building into Chicago in the 1880's, to make that city eventually the world's largest transportation center, early turned to Riddiford Bros. for their supplies of cleaning and maintenance materials.

**Originally brush manufacturers and distributors, this 69 year old jobbing firm built its success and reputation on integrity, quality and service.**

**By H. H. Slawson**

Among the company's customers today many of the oldest rail lines are still listed.

Talking with executives of Riddiford Bros., you learn of these and many other instances confirming the fact that any business built on unwavering integrity and dedicated to unselfish service for the customer, is bound to succeed.

Because of the company's longevity and its standing as a respected national institution in the sanitary supply distribution field, some more than casual attention is due its past history.

Riddiford Bros. of today traces its origin back to Brantford, Ontario, where in the early 1880's the firm of George E. Riddiford & Sons was manufacturing brushes of varied types. Inspired by glowing reports of the business prospects in that Illinois city at the foot of Lake Michigan, the three sons, William H., George and Arthur B. Riddiford, came to Chicago soon after New Year's Day, 1884 and on

Feb. 1 of that year opened their business as brush manufacturers and distributors. Their first location was at Lawndale Ave. and 25th Street, now a teeming quarter of the great metropolis but which, in those remote days, must have been far beyond the little pioneer town's limits.

Some time later the original name of the Canadian company was changed to its present designation. In 1890 Riddiford Bros. moved to Lake and Clinton Streets; 24 years later the firm moved to Lake and Wells; and in 1930 Riddiford Bros. located at 30 S. Wells. Each move being to larger quarters and bringing the business closer to the heart of the growing city. Finally, in 1935, they occupied their present quarters at 308 West Randolph St., which is readily accessible to the hotels, restaurants, office buildings and other such customers in the downtown "loop" business district.

In January, 1931, the Riddiford boys sold their business to Louis

Herzog, who, in recognition of the good will value of the company name, continued to operate the firm as Riddiford Bros. Arthur B. Riddiford, youngest of the three founding brothers, remained with the organization and today, as he approaches his 90th birthday, he still reports daily for duty as a regular, active route salesman.

Under Mr. Herzog's management the company continued to prosper and at the same time an idea he had long nourished began to take shape. Sanitation, Mr. Herzog felt, was bound to receive increasing attention in business and industry, in institutional and governmental operations. Such a trend, he held, could be accelerated if an influential trade organization were formed to promote the principles of cleanliness and sanitation. So, Mr. Herzog went around to talk up his idea with his friendly competitors.

Eventually he was successful in getting leaders in the trade together and the Janitors Supply Association was born. Later the name was changed to National Sanitary Supply Association and, as one of its earliest presidents, Mr. Herzog played a large part in laying the foundations for the influence NSSA now has in promoting his original interest in public sanitation.

Mr. Herzog also had another constructive idea. Any business, to be successful, he was firmly convinced, must have the wholehearted support of its entire organization, from top executives to the humblest employee. For years he pondered a plan whereby his entire staff could participate in ownership and profits of the Riddiford business. His death on Jan. 15, 1950, left this plan uncompleted.

His son, Dr. Robert Herzog, was fully aware and in sympathy with his father's desires and when the estate was settled Mr. Herzog's enlightened plan was consummated. The entire business was offered to a group of the company's employees, some with long service records, and on their purchase of the stock, the ownership and management of Riddiford Bros. was transferred to this group.

Charles E. Doyle, who joined the firm as a salesman in 1934 and



Riddiford's office is shown in top photo. Company has no sales and display room, since the business occupies the upper floors of its location at 308 W. Randolph St. Lower view shows storage of drums of bulk materials in the basement of the building.

was successively sales manager and general manager, became president, H. J. Fraser, who joined the sales staff in 1948 and later became sales manager, was named vice president. Burton E. Hillstrom, who joined the organization in 1939 as office manager, was elected treasurer, and Miss Dorothy McKeown, who has supervised the purchasing department for many years, became secretary of the corporation.

Present quarters of Riddiford Bros. comprise about 12,000 sq. ft. of space on two upper floors and a portion of the basement at 308 W. Randolph St. A large and well lighted office occupies the street frontage on the third floor, while the rest of the space is devoted to stock rooms and shipping facilities. The company has never been interested in developing a casual retail business, which, as was pointed out, explains why they do not maintain a street level showroom.

Nor does Riddiford Bros. solicit the business of small consumers of sanitation supplies. Tavern ac-

counts, for example, would be extremely unprofitable because of delivery costs alone, for such small orders as might be expected from that field. Such business is left to the independent salesman-driver, who can stock up his own truck at the Riddiford shipping dock and then re-sell and deliver the goods as he goes along on any route he succeeds in developing.

Sales efforts of the company's staff of eight field salesmen are concentrated exclusively on the largest outlets for sanitary supplies: hotels, restaurants and office buildings downtown; schools, churches, hospitals and other institutions; the railroad terminals, industrial establishments and others throughout the metropolitan area, from Evanston and other north shore towns to Gary, Ind., on the south and the flourishing west side suburbs.

A good salesman, company officials feel, is a priceless asset to any company. Every effort is made to find men who can be developed into top-

flight sales producers. The present policy is to put a young newcomer into the office or shipping room, where he gets acquainted with the lines carried and with the requirements of the customers. If he shows interest, enthusiasm, determination and other abilities, he is given a definite territory whenever an opening becomes available.

Turnover is not frequent, however. Many of the Riddiford salesmen have represented the firm for years; they are well acquainted with their customers' problems and their needs and can give helpful and intelligent advice as well as offer the necessary materials and equipment to serve the various users' requirements best.

One inducement to continuous long service is the comprehensive life, sickness and accident insurance plan covering all employees from president down to stockmen, and also their dependents. The new management put this plan into effect soon after taking over in 1950.

#### **Developing Business**

**I**N developing business the main reliance is placed on personal contact between salesman and customer. Direct mail is used to some extent, through circulars and other printed matter furnished by manufacturers and used as envelope stuffers in invoices and other mail leaving the office. Display advertising is run under different classifications in the Chicago telephone directory and several listings

are also inserted in certain trade directories.

A catalog of 72 or more pages is issued at intervals, which pictures and describes the varied merchandise available. No cut price sales are ever staged, which eliminates promotional drives and contributes to customer satisfaction through the knowledge that Riddiford Bros. has just one price for everybody.

Orders are delivered daily to all parts of the city and suburbs. Each day's shipments are loaded on trucks in mid-afternoon for delivery the following day, thereby assuring prompt service to customers in the entire area.

From the small brush factory of 69 years ago Riddiford Bros., Inc., has developed into a business which carries one of the largest and most complete stocks of janitor supplies and sanitation equipment serving the greater Chicago metropolitan area and the central western states.

Brushes, however, are still a featured item, as a tour of the stockrooms reveals. On a half dozen stacks and shelves, tiered from floor to ceiling, this extensive line of brushes is kept, some bearing nationally known brand names, others made to Riddiford specifications under their private brand label. Examination of the printed catalog shows fourteen pages devoted to listing of brushes alone, while almost as many more pages list brooms, mops, dusters, wax applica-

tors and related items. Everything else handled is likewise on hand abundantly in racks and bins, ready for prompt filling of orders.

Extensive stocks are carried of galvanized ware, receptacles, mop tanks, wringers, floor maintenance machines, industrial vacuum cleaners, soaps, waxes, and salt in season for snow removal. The firm has little trouble in keeping these goods moving. Turnover is fast and usually pays off in satisfied customers, who get what they want just as quickly as it can be rushed to them from these stocks.

A perpetual stock inventory system is maintained and, as a double check on this paper work, order fillers are made responsible for notifying the front office buyer whenever quantities of any item in a bin get down to a specified minimum.

The company is especially proud of its line of soaps, floor waxes, synthetic detergents, scouring powders and other chemical specialties items. Packed in drums, barrels and cases these stocks are stored in the basement stockroom area, because of their weight.

The soaps and other materials are sufficiently varied to solve any particular cleaning problem put up to the salesman. Ten different types of wax are carried to meet every purpose or demand. Outstanding national brands are available and the company

(Turn to Page 108)

Loading time in the shipping department is shown in photograph at left; photo at right is of a section of the Riddiford warehouse.







## Standards in the Soap Plant

**P**HILOSOPHICAL speculation was, to a large extent, the basis of men's activity in the Middle Ages. The man who looked for experimental verification of statements and procedures was the object of derision and the results of his experiments were disregarded in reaching decision on matters of policy. Sometimes, in our industrial organization of society the reaction is not very different. The analyst whose objective report is unfavorable to a product can be unpopular with the "men of vision" and the inventors. Belief in the accuracy of deduction from experimental facts and willingness to accept the results of scientific tests are not the invariable accompaniment of policy making decisions in industry.

To maintain a high output from a factory and top quality in its

products calls for a deliberate policy to be put into effect and this must be enforced by conscious control. The control is achieved by introducing an orderly arrangement of operations and tests into the organization. This is scientific control. It is an attitude of mind in those who are directing the factory; it is not something that can be imposed from without, for example, by equipping and staffing a laboratory to analyze raw materials and finished products. There can be no efficient production without order and it is this outlook which is the distinguishing feature of scientific control. From it, there will follow certain effects which are the outward signs and should not be mistaken for the moving force behind them. These effects mainly come under the term standardization; they are not ends in themselves but are in-

tended to be the means of reaching an efficient state of production.

In the soap industry, standardization is of two main kinds: the standardization of objects, on the basis of physical properties, such as size and shape; the standardization of processes mainly on the basis of chemical properties.

### **Product Standardization**

**T**HE standardization of objects means producing the greatest number of products out of the minimum number of components. It eliminates unnecessary variety and, if intelligently applied, it does not lead to dull uniformity. In this connection, its products have been compared to the human body — each of us possesses his individuality and there is no dull uniformity in human appearance, al-



though our insides are effectively standardized. The initial step in the standardization of objects is to devise a system of classification which takes account of their significant features, range of sizes and quality. A numerical coding system is usually chosen because these have been found, in practice, easier to work and can form a basis for elimination of unnecessary items. Whatever system is adopted it must not be thought that with its introduction to the factory, the matter rests. Actually, scientific control of stocks is only then in a position to begin. The code has to be used to simplify the work of the factory by showing up the existence of redundant or duplicate stocks and by providing a starting-off point in the manufacture of a new product or the design of a new process.

In the soap industry, as in the chemical industry, the standardization of processes mainly on the basis of chemical properties is more far-reaching in its effects than is the standardization of components. The latter is applicable mainly to raw materials,

**By Dr. J. L. Boyle**  
Edinburgh, Scotland

plant equipment and packing materials but process standardization is necessary for control of quality and of costing as well as to comply with contract specifications and Government regulations.

The purpose of official specifications of quality is to protect the public but they have consequently made it necessary for each firm to have its own finished product specification for internal use. This requires scientific control of production. For, it is obviously essential to use standardized methods of manufacture if one expects to obtain from every batch, a product that complies with a prescribed specification. Therefore, scientific control should extend throughout a soap plant — incoming materials are recorded and classified by the stock coding system, which keeps track of them as they pass through the opera-

tions of production; the manufacturing processes are carried out according to standardized instruction sheets; the product at each stage of manufacture has to meet certain requirements, culminating in the tests that make up the finished product specification.

An adequate definition of a Standard is "an orderly arrangement of ideas" and the value of scientific control in a factory rests on the application of this conception all through the manufacturing operation instead of limiting it to the specification of raw materials and finished products. Each step in the preparation of soap should be standardized. Such "process standards" help to reduce the variability in operation for which the human factor in industry is responsible and are necessary when a product of consistent quality is required.

#### **Quality Specifications**

**T**HERE should be quality specifications to which all raw materials to be used in the process must comply. The number of changes which the materials undergo in the kettle house should be specified with the essential details of each change, such as the duration of boiling and of settling, the density of lye, the size of the seat and its alkalinity, the disposal of nigras and of lyes. In addition to these points, most of which can be expressed numerically and precisely, there should be instructions on how those conditions can be achieved, such as, when and how to add caustic on the saponification change, how to grain and when to use open and closed steam, how to make the soap pitch well on those occasions when electrolyte is high.

In the manufacture of a soap powder, the operating standards should lay down the speed, duration and temperature of crutching, the temperature pressure and throughout at the nozzles of the spray drier, the temperature of incoming and exhaust air and the volume of air. The standard instructions should deal with subjects such as the order of adding ingredients to the crutcher, how to control the moisture content of the mix, for example, by varying the proportion of remelt added at this stage, how and where perfume

is added and the inspection routine applied to nozzles, fan blades and screens to insure good maintenance.

The precision which is advisable in the compilation of process standards varies somewhat according to the nature of the operation being described. A high degree of precision is required when dealing with the kettle house, because relatively small variations in technique may cause wide divergencies from the finished product specification. Less detailed description is needed for glycerin evaporation and distillation because it lends itself more to instrumental control. In evaporation, it would be sufficient to specify the vacuum in the evaporator, the limiting temperature in the bootleg, and the temperature of the crude at the finish. In distillation, the key points are the still pressure, the rate of steam supply, vapor and condenser temperatures; the instructions would include the extent of preheating, the point at which additions, such as caustic, are made and the disposition of condensates.

The standard for an entirely mechanical operation such as the packing of cartons in a case, would specify the dimensions of the carton and the case, the net weight of each unit with the permissible tolerance, the number and arrangement of cartons within the case, the method of sealing, position of date stamp and the machine speed.

The purpose of a standard is to describe the operation in sufficient detail in order to insure that the correct procedure is clearly shown, but confined to matters which may influence the result. As well as having standards for each operation, it is advisable to have a section dealing with general points, that is, points which are important but are common to several sections, such as the test weighing of finished products or the precautions to be observed in the use of filter presses.

#### **Must Be Used Always**

**S**TANDARDS must be used continually and at every stage in the process, if they are to be fully effective. They should be incorporated into the routine of the factory and not kept merely for reference and consultation, when something goes wrong. To help

towards this end, copies of the appropriate standards should be issued to each person who shares responsibility for a process and the standard itself should carry the signature of the highest executive on the manufacturing side, so that it possesses the authority that will insure respect. Regular use of them has the incidental effect of reducing the chance of an out-of-date standard being in circulation, which is a deplorable occurrence but does sometimes happen. Usually this is due to a failure to inform the standards department of changes in production policy and can be avoided by bringing this department into meetings where policy is decided, so that it is aware of projected changes and can have the new standards ready for issue when the change takes place.

Standards should be kept up-to-date, also by having a detailed audit of the process at regular intervals. The primary criterion of efficiency in an undertaking is the extent of the profit it makes, but a six monthly or annual audit of the manufacturing process operations is a valuable secondary index of efficiency. In such an inspection many deviations will be discovered and they should be classified according to their gravity, in order to avoid attaching importance to the minor departures from standard. It is then easier to focus attention on the serious deviations. For example, deviations might be grouped in order of importance, as follows:

Class 1. Deviation that should not occur.

2. Deviations for which permission has been given.

Class 3. Deviations that are unavoidable but temporary.

Class 4. Deviations that are under investigation.

Class 5. Deviations due to inadequate equipment.

Class 6. Deviations which should be made standard procedure.

In considering the results of such an audit, it is necessary for the standards department to receive top level support, to make sure that the production management will attend to complaints of deviations from standard, when they are reported.

The distribution of standards deserves attention, as well as their preparation and use, because some of them are of interest to other departments than production. Thus, process specifications are relevant to the costing department, quality control specifications to sales department and raw material specifications to the buying department.

The satisfaction that people derive from their work depends on how free they are to respond to the situations that arise; the effectiveness of the response will depend on how adequate is their appreciation of the situation. Scientific control of production should increase this satisfaction by attempting to give each responsible person a clear account of the operations under his supervision. It should also be emphasized that scientific control, exercised through standardization, does not discourage the use of initiative. In fact, standardization of the mind, at all levels of employment, is to be avoided. The adaptability of an organization is reduced by a policy that lays great stress on the maintenance of the status quo and there is a lack of resiliency in one where the management frowns on innovation, simply because it might upset the existing methods of operation. Such an attitude has no connection with standardization. Written, constructive criticism of current standards should be welcomed and when it results in an alteration in the standard, the man on the job, who made the criticism will take a personal interest in seeing that the new standard is complied with, because it is the fruit of his response to the job.

Sometimes the difference between collection of data and the use of that data for scientific control is not appreciated. This may happen with regard to the analytical information obtained in the laboratory. This should be used as a means of direct control over each stage of production by compiling a weekly or monthly report, showing the frequency and extent of deviations of products, both finished and in process, from the standards of quality laid down for them. The work of the control laboratory is an important aspect of scientific control be-

cause its results comprise the final court of appeal on any questions of quality. But incomplete use is being made of it, if the analytical reports are looked at by the executives only when the quality of a product is questioned. A systematic, summarized record of the type mentioned above can be used to detect weak links in the chain of production before they have caused serious trouble. In other words, it is not sufficient for the analytical section merely to collect data; it should be intelligently assessed, recorded in an informative, though summarized manner and the results regularly drawn to the attention of the management.

The analytical section of a soap factory should act as the interpreter of the research worker to the production division, as the source of information for process development and as the place where factory executives find the information on which decisions are based. For this last purpose, analysis must be rapid and rapidity usually involves instrumentation. Normally there is no need for the highest accuracy nor for complete analysis. It is enough that it should give the information needed to reach a decision. The assessment of the significance and reliability of results is sometimes difficult and, in this connection as well as in others, statistical methods are valuable, in making the results of routine control tests more readily applicable as tools for process control.

Scientific control is objective and, as far as possible, based on facts. It is sometimes said to be impersonal in its application and this is likely to be so in comparison with control which rests on speculation. But this need not be to its detriment, especially if it is realized that herein lies a possible weakness and care is taken to see that there is sufficient unity of effort and mutual understanding running right through the organization, both in its vertical and its horizontal personnel relationships.

Robert H. Allgood has recently been appointed director of public relations for both the industrial and dry cleaning divisions of Detrex Corp., Detroit.

## Folding Paper Box Awards to Soapers

THE annual 1953 carton competition sponsored by the Folding Paper Box Association of America brought numerous top honors to makers of soaps, sanitary chemicals and cosmetic products whose paperboard containers were among the 4,516 entries submitted for judging in the contest.

Judging was based on four primary points: (1) technical superiority of printing; (2) technical superiority of construction; (3) best potential new volume use for paperboard; and (4) general superiority according to end use — in varied fields. Awards were announced at the Box Association's annual convention in March at the Drake Hotel, Chicago.

In the fourth grouping, "General superiority according to end use," in soap field, first place award was given the "Fels Naptha" carrier, man-

ufactured by Container Corp. of America for Fels & Co., Philadelphia. About this prize winner the judges commented: "Terrific for impulse buying. A relatively new idea which should be encouraged. Economical package for 10 bars of soap."

Second place award in this same group went to Procter & Gamble Co., Cincinnati, for its "Cheer" carton, manufactured by Bartgis Bros. Co. Judges commented: "Striking design alone or in mass display. Carton looks good on television."

Three containers in this same soap class were given honorable mention awards for "general superiority according to end use." These were (1) the "Bab-O" carrier, made for B. T. Babbitt, Inc., New York, by Container Corp. of America; (2) the "Palmolive" soap carton, made for Colgate-Palmolive-Peet Co., Jersey City, N. J.,

by Wm. W. Fitzhugh, Inc., and (3) the "Bolta Scour Puss" carton, a Robert Gair Co. carton for the Bolta-Saran, Inc., impregnated scouring pad. Judges commented as follows:

The Bab-O carrier was characterized as having: "A simple, stark design which commands attention at point of purchase sale. Seeks out impulse with its '1/2 price sale' offer."

The "Palmolive" carton was said to be a "Convenient way to buy hand soap. Increases unit purchases. Easy to carry."

The "Bolta Scour Puss" box was described by the judges as having: "Product name played up. Good display of merchandise. Housewife can feel product without removing it from carton."

In the judging for "technical superiority of printing" a first place award for the "Best 2-color printing" was given the "Bloc" liquid detergent

(Turn to Page 81)





# WHAT'S

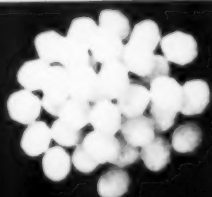
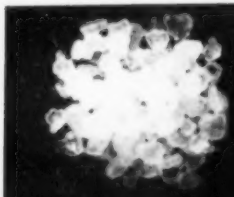
Two new detergents, both with the "Super Suds" brand name, upper left, are being test marketed by Colgate-Palmolive-Peet Co., Jersey City, N. J. White "Super Suds" detergent is being tested in Chicago area and blue "Super Suds" in Kansas City region.

New floor maintenance machine, top right, for the small shop is "Johnson's Wax Special 12", recently introduced by S. C. Johnson & Son, Inc., Racine, Wis. Features include a 12-inch brush powered by a 1/4 h.p. motor, an adjustable handle that can be set to a convenient operating height for any size operator, and finger springs on brush brackets which keep the machine riding level at all times.

The introduction of paradichlorobenzene and naphthalene ball and flakes in new "Plasti-Seal" package, as shown in lower left, has

just been announced by Click Chemical Corp., Mt. Vernon, N. Y. New "Plasti-Seal" package is said to eliminate contamination and odor problems. Bags are claimed to be breakage and moisture-proof. They also offer savings on freight and handling charges.

Newest addition to the line of "Great Seal" products of Styron-Beggs Co., Newark, O. is a new silver polish for the cleaning of sterling, silver plate, copper, brass and chrome. The product, shown in lower right, is applied with a soft cloth, rubbed until clean, and then polished to a high lustre with a clean cloth. Comes in eight ounce "Duraglas" bottles made by Owens-Illinois Glass Co., Toledo.





# NEW?

"Swish," upper left, a new single operation combination cleaner and waxer has recently been announced by Carlisle Cleaner and Manufacturing Co., Brooklyn, N. Y. Product is being marketed in can made by Eastern Can Co., Brooklyn; label by Barry Color Printers, Inc., Brooklyn. "Swish" retails for \$2.

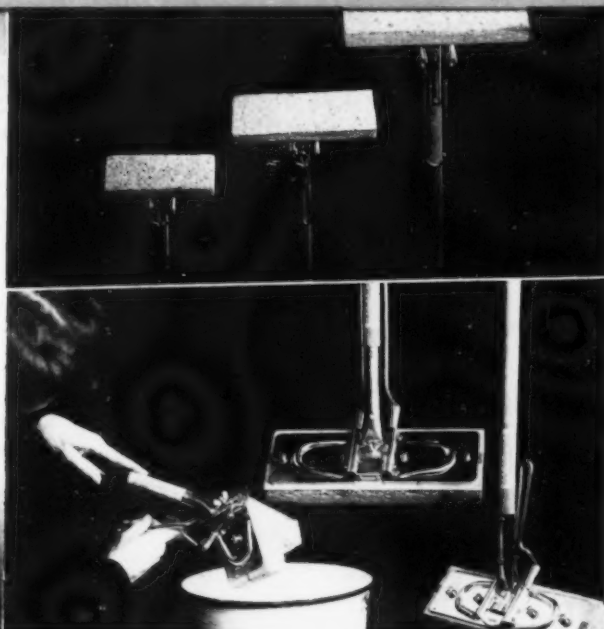
Three new "Speedway" mops designed for use in industrial plants, hotels and institutions are being made by Hancock Quickie Mop Co., Philadelphia. The three "Speedway" mops, upper right, have replaceable mop heads, made from du Pont cellulose sponge. When the wringing handle is pulled down (as shown in lower half of photo), the sponge squeezes damp-dry against itself. Suggested retail price for the "Giant" is \$10.50; the "Intermediate," \$7; and the "Maid," \$3.75.

"Pine-Sol," lower left, is now being marketed by Milner Products Co., Jackson, Miss., in a newly-designed bottle and label. The slenderized bottle containing sanitizing cleaner has the shelf-advantage of a larger appearance. New bottle features the name

"Pine-Sol" embossed in the glass. Revamped bottle makes it easier for women to pick up and handle and the shape is more distinctive, the maker says.

New self-emulsifying and self-scouring solvent, called "Gunk G. P.," in a pint size can designed for home use, has recently been introduced by Curran Corp., Lawrence, Mass. The new product, shown in lower middle, is a solvent which is said to have no flash point, is non-caustic, non-acidic, emits no toxic vapors and does not tend to de-fat the skin and hands. Approximate retail price is 75 cents.

New "Gala Powdered Bleach," lower right, is being introduced by Milner Products Co., Jackson, Miss., with a one-half price sale promotion. Package illustration of a fleecy lamb conveys the idea that "Gala" bleaches nylon, rayon, silk, cotton, wool and colors safely. The blue is synonymous with whiter washes. A perforated "punch-out" slot makes for easy pouring.



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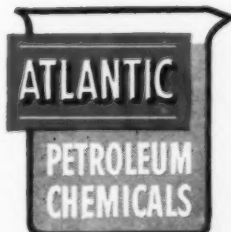
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# News

## N. N. Dalton Dies

N. N. Dalton, formerly research consultant for the Glycerine Producers Association, New York, died



N. N. DALTON

at his home in Kansas City, April 26. Mr. Dalton started in the soap industry in 1899 when he joined the glycerine division of Procter & Gamble Co., Cincinnati. In 1903 he went to work for the Peet Brothers Manufacturing Co., and in 1910 became vice-president of that company. In 1926 he was made vice-president of the Palmolive-Peet Co. and in 1928 of the Colgate-Palmolive-Peet-Co., Jersey City, N. J. In 1934 he severed his connection with Colgate as its executive vice-president, and devoted all his time to the work of the Association.

Mr. Dalton served as secretary of the Glycerine Committee of the War Industry Board under Bernard Baruch, during the First World War. And he was chief of the Glycerine Division of the War Production Board, in the Second World War. Mr. Dalton was co-editor of the American Chemical Society Monograph "Glycerol" published in 1952. He is survived by his wife and by two sons.

## AASGP Proceedings

Proceedings of the 26th annual meeting of the Association of American Soap & Glycerine Producers, Inc., held at the Waldorf-Astoria Hotel,

New York, Jan. 27-29, were published recently by the association. Contained in the 250-page book are the papers, speeches and the program of the meeting. Copies are available to member companies for \$5 per copy and to non-members at \$10 per copy. Requests should be sent to Association of American Soap & Glycerine Producers, Inc., 295 Madison Ave., New York.

## Dial Shampoo Goes National

National distribution of "Dial" shampoo is now under way, it was recently announced by Armour & Co., Chicago. Previously the product was sold on a regional basis. A variety of window, floor, counter and shelf display materials are being used to promote the shampoo in retail stores. Cooperative retail advertising is also being used. The Armour advertising program for "Dial" shampoo is being co-ordinated with the "Dial" soap schedule. The shampoo is to be featured on the Dave Garroway television show in 30 major markets, and also on the daytime radio version of the program. Promotion of the shampoo will emphasize the product's bactericidal agent, "AT-7". The shampoo, being marketed in a new 3½ ounce plastic squeeze-type container, is fair traded to retail for 67 cents.

## C-P-P Changes Name

Change of name from Colgate-Palmolive-Peet Co. to Colgate-Palmolive Co. was voted recently at a meeting of the company's stockholders in Jersey City, N. J. In announcing the change Hugh Jewett, secretary, stated that "The name was never well known here in the East, and in recent years Peet products have become less important. So the stockholders voted the change." The name change is the latest of many since the firm was founded as Colgate and Co. in 1806. "Peet" became hyphenated into the company's name in the 1926 merger when Peet Brothers Co. joined the present firm. Labels are being printed with the new name "Colgate-Palmolive Co."

## Drew Appoints Hedderig

Appointment of John K. Hedderig, Jr. as sales representative in the New England area was announced re-



JOHN K. HEDDERIG

cently by E. F. Drew & Co., New York. Mr. Hedderig is handling "Dri-syn" and other Drew dry cleaning products. His headquarters are in the firm's Boston office. Mr. Hedderig has had several years experience in the dry cleaning and laundry industry and for six years operated his own drycleaning and rug plant.

## Borax Price Rise

Prices for borax and boron have been increased by \$2.50 per ton in bulk and by \$3.50 per ton in bags, barrels and kegs, effective May 15, according to a recent announcement by Pacific Coast Borax Co., Los Angeles. Other borates will increase in price in accordance with the general rise in the firm's selling schedules.

## Lever Names Johns

A. E. Johns has recently been appointed division manager in the Texas territory for Lever Brothers Co., New York. Mr. Johns has been associated with Lever Brothers since 1939. Prior to his new appointment, he had been division manager for seven southern states with headquarters in Atlanta, Ga. He is making his headquarters in Houston.

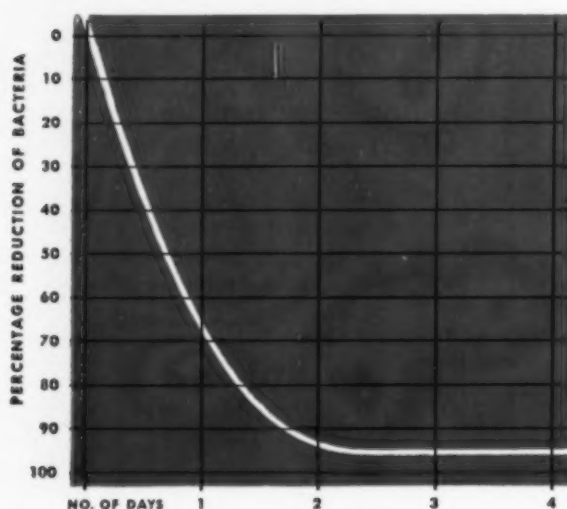
# Tests show reduction of skin bacteria on hands with "DYSEPT" containing hexachlorophene

This new liquid soap perfectly meets the needs of surgeons, physicians, hospitals, clinics, restaurants—any application where it's important to maintain skin bacterial population at a minimum level. Independent laboratory

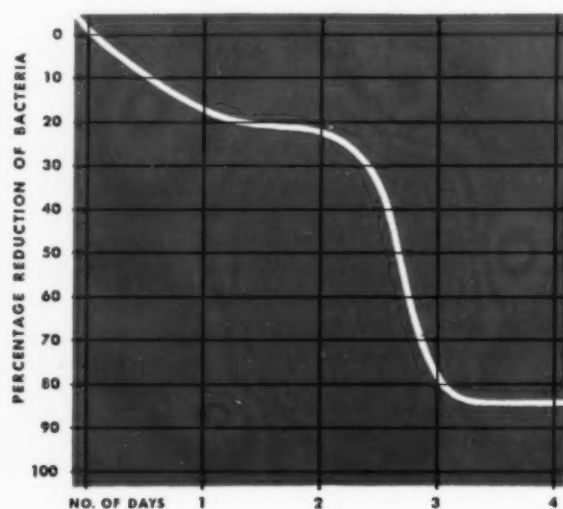
tests demonstrate that convenient "DYSEPT"—with 5% hexachlorophene to the anhydrous soap content—is both bactericidal and bacteriostatic with continuous daily use. Charts show percentage reduction.

• • • • •

**CHART No. 1.** Percentage reduction in resident bacteria on hands with continuous daily use of undiluted "DYSEPT" for 4 consecutive days. Tests actually ran over 5-day period. "Zero" days represents bacterial population before use of "DYSEPT."



**CHART No. 2.** Percentage reduction in resident bacteria on hands with continuous daily use of "DYSEPT" diluted 1:1 with water for 4 consecutive days. Again, tests actually ran over 5-day period. "Zero" days represents bacterial population before use of "DYSEPT."



## NOTE THESE FACTS ABOUT THE USE OF "DYSEPT"

"DYSEPT," containing 1% hexachlorophene to the total volume, leaves an invisible film not removed by rinsing which, with application one to three times daily for at least five days a week, reduces bacterial skin flora to about 5% of the usual amount and maintains that level. It has been found to reduce surgical scrub-up contact time with daily use. "DYSEPT" is non-toxic and non-irritating, and acts effectively even when diluted with water. A clinical brochure, with laboratory reports, suggestions for using and other technical data, may be obtained by mailing the coupon. "DYSEPT" is available through all Davies-Young distributors.

THE DAVIES-YOUNG SOAP CO.  
DAYTON, OHIO

Also makers of  
**"DYSEPT"**  
Hand Lotion  
(containing Hexachlorophene)

MAIL THE  
COUPON  
FOR SAMPLE  
AND DETAILS

• • • • •

• THE DAVIES-YOUNG SOAP COMPANY SSC 5-53

• BOX 995, DAYTON 1, OHIO

• Please send free sample of ☐ "DYSEPT" Liquid Soap and clinical brochure.

• ☐ "DYSEPT" Hand Lotion.

• NAME .....

• ADDRESS .....

• CITY .....

• STATE .....

• • • • •

### Wyandotte Appoints Buck

Royce P. Buck was recently appointed as a field representative in the research and development division



R. P. BUCK

of Wyandotte Chemicals Corp., Wyandotte, Mich. Mr. Buck is concerned with the introduction of new chemical products including "Plurionics", special types of "Carbose" and "Halane", a new active chlorine-containing organic compound. Mr. Buck was previously employed by Mallinckrodt Chemical Co., St. Louis.

### Lever Profits Decline

"There is no mystery about why we didn't make greater profits in 1952," Jervis J. Babb, president of Lever Bros. Co., New York, said recently. "The prices of some of our products declined and our operating costs went up. Primarily, we just didn't sell enough goods. Sales increased in 1952 over 1951, but only by six percent. This was not enough to offset our increased expenses, which went up by 10 percent. During the last year we made many improvements in our physical facilities, our products and our operations that should pay good dividends in 1953 and for many years to come. At the end of 1952 the company had provided physical plant and equipment valued at more than \$16,000 per employee. The outlook for 1953 is favorable and the 1953 budget calls for a substantial increase in both sales and profits."

The latest statement of Lever Brothers, dated December 31, 1951, shows a decrease in surplus of \$2,446,-

433 from the preceding year. For the three years prior to 1951, the statement shows that surplus increased \$1,480,-138 in 1950, declined \$14,031,181 in 1949, and decreased \$8,838,171 in 1948.

Thus, the surplus of \$12,287,-725 at the end of 1951 was the smallest for many years and compared with a record \$36,123,372 at the end of 1947. Lever Brothers ended 1951 with holdings of cash and U. S. securities of \$8,163,458, compared with \$39,697,-255 in the previous year. This decline was partly offset by an increase in inventories, with merchandise and supplies on December 31, 1951, amounting to \$50,206,230, compared with \$30,-153,820 at the end of 1950. Long-term debt at \$55 million and capital stock at \$65 million (650,000 shares of \$100 par value) were unchanged from the previous year.

### Soap Mill Sold

Dominion Linseed Oil Co. has recently sold its plant at Baden, Ontario to Toronto Elevators, Ltd., which is continuing to operate it for the manufacture of soap, linseed oil and crushed flax. G. R. Wilcox is in charge of the plant, which has been renamed as Baden Linseed Oil Mills, Ltd.

### Georges Chiris Dies

George Chiris, 81, former head of Antoine Chiris of Grasse and Paris, France, and founder of Antoine Chiris Co., New York distributor for the French firm, died recently at his home in Marrakech, Morocco, North Africa. Mr. Chiris took over management of the family essential oil business in 1900 and extended its activities by developing the firm's Algerian plantations and founding numerous companies in the French Empire and elsewhere abroad. Mr. Chiris formed the American and British firms for the manufacture and distribution of aromatic raw materials. He withdrew from the business in 1938, but resumed management of the factories during the Second World War. At the end of World War II, Mr. Chiris' son became head of the firm. In 1946 Mr. Chiris established a new rose factory in the valley of the Dades in Morocco.

### Dunnington C-P-P Director

Walter G. Dunnington was elected to fill an existing vacancy in the board of directors of Colgate-



W. G. DUNNINGTON

Palmolive-Peet Co., Jersey City, N. J., at the annual meeting of stockholders held recently. Mr. Dunnington is a member of the New York law firm of Dunnington, Bartholow and Miller, and a trustee of Sun Chemical Corp., Standard Brands, Inc. and Great Northern Paper Co.

At the same meeting, the following were re-elected officers and directors of the company: S. B. Colgate, honorary chairman of the board; C. S. Pearce, honorary chairman of the board; E. H. Little, chairman of the board; J. H. McConnell, president; W. L. Sims, II, executive vice-president; J. A. Reilly, executive vice-president; and Manning O'Connor, vice-president. Other directors are: H. A. Colgate; John K. Colgate; J. A. Coulter; W. B. Johnson; N. F. S. Russell; and Stuart Sherman. Other officers are: H. R. MacMillan, vice-president; Hugh Jewett, vice-president; R. W. Taylor, vice-president; H. W. Reynolds, vice-president; E. N. Felio, treasurer and assistant secretary; and A. E. Johnston, assistant secretary.

### Moss Soap to Florida

Moss Soap Co., manufacturers of soap powders and detergents recently announced the removal of its plant and offices from 914 South Seventh Street, St. Louis to Pinellas International Airport, St. Petersburg, Fla.



# DRYMET\*

## THE ECONOMICAL DETERGENT SILICATE

Cowles DRYMET, anhydrous sodium metasilicate, is the most highly concentrated form of sodium metasilicate available. It is more economical to use, on the basis of both  $\text{Na}_2\text{O}$  (alkalinity) and  $\text{SiO}_2$  (silicate) than any other type of hydrated or anhydrous detergent silicate, either compounded or by itself. DRYMET contains no water of crystallization.

# CRYSTAMET\*

## THE MEDIUM pH DETERGENT SILICATE

Cowles CRYSTAMET is a pure, perfectly white, free-flowing granular pentahydrate sodium metasilicate with the normal 42% water of crystallization. Suggested for compounding when it is desirable to lower the concentration of a finished product. Readily soluble—chemically stable—easy to handle. Can be used on medium pH jobs.

# DRYORTH\*

## THE HEAVY-DUTY DETERGENT SILICATE

Cowles DRYORTH, anhydrous sodium orthosilicate, is a powerful, speedy, heavy-duty cleaner with valuable penetrating and wetting-out properties, reinforced dirt-removing power and unusual emulsifying action. It is an anhydrous, free-flowing powdered silicate containing not less than 60%  $\text{Na}_2\text{O}$ , which may also be used as an economical constituent of high pH cleaning compounds.

# DRYSEQ\*

## THE ALL-PURPOSE DETERGENT SILICATE

Cowles DRYSEQ, anhydrous sodium sesquisilicate, is a medium pH alkaline cleaner which will do fast, dependable work at a low cost to the user. It is a white, free-flowing powder, quickly and completely soluble in hot or cold water—containing 56.75%  $\text{Na}_2\text{O}$ —making it an economical base material for compounding.

PROMPT SHIPMENTS FROM  
CONVENIENT WAREHOUSE STOCKS

*Cowles*  
**CHEMICALS**

*We'll be glad to send you  
our DRYMET File Folder  
containing complete technical  
information and suggested  
formulations.*

\*Reg. U. S. Pat. Off.

# COWLES CHEMICAL COMPANY

7018 Euclid Avenue

Cleveland 3, Ohio



### David A. Bennett Dies

David A. Bennett, 63, president of Albert Verley & Co., Chicago, died at his home in Saugatuck, Mich., April



DAVID A. BENNETT

19. Mr. Bennett started in the essential oil industry in 1916 with M. L. Barrett Co. He became mid-west representative for Heine & Co. of Leipzig, Germany, in 1917. Mr. Bennett began his association with Dr. Albert Verley of Paris when he founded Albert Verley & Co., in 1926.

At the time of his death, Mr. Bennett headed various Verley subsidiaries: Verley Chemical Co., Newark, N. J.; Verley Products Co., Chicago; and Verley International, Paris, France. He was a member of the Toilet Goods Assn. and the Chicago Drug & Chemical Club.

Albert Verley & Co. and its subsidiaries are continuing operations under the direction of Edward J. Strobl, executive vice-president.

### Margolis Joins Kings Men

D. R. Margolis was recently appointed as national sales and promotion director for Kings, Ltd., of Los Angeles, maker of men's toiletries. He formerly was advertising director of Cosmetics and Toiletries Co., Los Angeles.

### Dishwashing Bulletin

Latest bulletin on how a good dishwashing compound performs has recently been released by Hospital Bureau of Standards and Supplies, Inc., New York. The bulletin is divided into chapters discussing: dishwashing com-

pounds for machines; basic ingredients in the best dishwashing compounds; preparing and washing of dishes; methods of feeding the compound; and adjusting for hardness of the water. Copies of the booklet are available by writing to Hospital Bureau of Standards and Supplies, Inc., 247 Park Ave., New York.

### Solvay Names Keene

Paul A. Keene has recently been appointed assistant to the director of development, Solvay Process Division, Allied Chemical and Dye Corp., New York. Mr. Keene, with Solvay since 1919, was for several years chief of research, and more recently has been engaged in important technical studies of a research nature, as well as participating in development of future programs. He is a graduate of Hiram College in Ohio and holds a Master of Science degree in chemistry from the University of Michigan.

### Grimm Arnida VP

Charles H. Grimm has recently been elected vice-president and director of Arnida Products Corp., New York. Mr. Grimm was formerly connected with the Felton Chemical Co., Brooklyn, N. Y., as manager of the essential oil division.

### Kay-Fries Reduces Prices

Price reductions ranging from 30 cents to 55 cents on the entire schedule for triethyl or thioformate have recently been announced by Kay Fries Chemicals, Inc., New York. This price reduction brings the chemical into the dollar-per-pound field, the company reported.

### Forms De Laire, Inc.

Establishment of De Laire, Inc., a new corporation with offices at 114 E. 32nd St., New York, was announced May 1 by Louis Bezaud, general manager. The new company which has exclusive sales representation in the U. S. and Canada for perfuming materials manufactured by Fabriques De Laire, France, succeeds the De Laire Division of Dodge & Olcott, Inc., New York. The De Laire association with D&O has been terminated.

### Grace D&O Manager

Neil Grace, formerly New York sales representative for Dodge & Olcott, Inc., New York, has recently



NEIL GRACE

been appointed manager of the Los Angeles branch. Mr. Grace joined the D&O organization in 1939, and has served as a member of the flavor department, and in the City Sales Office Division.

### DCAT Spring Meeting

The Drug, Chemical and Allied Trades Section of The New York Board of Trade recently announced that it will hold a spring luncheon meeting on May 26, at the Hotel Astor. Featured speaker will be Red Motley, publisher of *Parade Magazine*.

### Fragrance Group Elects

The new slate of officers elected by the Fragrance Foundation at its fourth annual convention held recently at the Hotel Plaza, New York, included the following: H. Gregory, Chanel Inc., president; Jean Despres, Coty Inc., and Pierre Harang, Houbigant Sales Corp., vice-presidents; Frazer V. Sinclair, Pope Publishing Co., treasurer; A. L. van Ameringen, van Ameringen-Haebler, Inc., secretary. Theme of the convention was "Getting More Fragrance Business—Where, What, Why and How!". Samuel Rubin, president of the foundation and president of Faberge Perfumes, placed the potential volume of the fragrance industry at \$500 million dollars in his opening address.

A New Member of a

Distinguished Family



# Glyco-Mist

Now Packed in New "SPRA-TAINER" Aerosol Bomb Dispenser

With the addition of this new attractive GLYCO-MIST container we now proudly present GLYCO MIST in what we feel to be the most beautiful assortment of packages ever offered the sanitary supply trade. Handsome 5 gallon lithographed pails, gallons, quarts, 12 ounce and 6 ounce A.C.L. finish bottles and the most eye-catching pastel pink, green and white aerosol bomb! GLYCO-MIST—America's most fragrant deodorant-sanitizer—the really *nice* germ-killer, is available in bulk for private packaging or can be shipped in our own new beautiful packages showing you as distributor. Why wait any longer to capitalize on volume sales of the leading industrial deodorant on the market—the deodorant that has *no* competition from a quality viewpoint!

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LABORATORY APPROVED



FIELD TESTED PRODUCTS

### Tall Oil Assn. Officers

A. Scharwachter, Arizona Chemical Co., New York, was re-elected president of the Tall Oil Assn. at its annual meeting at the Hotel Hershey, Hershey, Pa., April 16 to 19. The association also elected Arthur E. Griffin, sales manager of the chemical division, Camp Manufacturing Co., Franklin, Va., vice-president; Dernel Every, secretary-treasurer; and T. K. Heston, assistant secretary-treasurer. Also admitted to membership in the association was Crossett Chemical Co., Crossett, Ark. This brings to 14 the number of manufacturers and sellers of tall oil in the association.

### Myatt Joins Atlantic

DeWitt O. Myatt has been appointed to the newly created position of manager of development, Dr. Arch C. Scurlock, president of Atlantic Research Corp., Alexandria, Va., announced recently. Mr. Myatt's duties include the coordination of industrial research and development, marketing, and contract research programs of the company. He is responsible also for technical staffing of the organization,

organization policies for technical personnel, and public and community relations. Mr. Myatt previously worked for American Chemical Society.

### Lindsay Heyden Secy.

James K. Lindsay was elected secretary of Heyden Chemical Corp., New York, at a recent meeting of the board of directors, to take the place of Paul van der Stricht who has resigned. Mr. Lindsay was previously a partner in the law firm of Fulton, Walter and Halley, New York.

### Guenther on Lecture Tour

Dr. Ernest Guenther, vice-president and technical director of Fritzsche Brothers, Inc., New York recently gave four lectures under the auspices of local sections of the American Chemical Society in Kingsport, Chattanooga and Nashville, Tenn., and in Winston-Salem, N. C. A fifth lecture was given for the local Lions Club in Columbus, Ga. Dr. Guenther's talks were accompanied by full-color motion pictures covering essential oil production throughout the western world.

### Cleanliness at Bridgeport

Two hundred thousand dollars a year might sound like a huge bill for keeping works and workers shining clean, but Bridgeport Brass Co., Bridgeport, Conn., recently revealed that foot baths and showers pay off in terms of better health and morale among workers. In fact, *National Safety News* quotes Dr. William T. Clark, company physician, as saying that skin irritations caused by the work are practically non-existent. He gives soap and water major credit. The company makes it easy for workers to keep themselves clean by providing 30 washrooms, including locker and shower rooms, in the larger of its two plants, 24 in the smaller. And they, too, are kept scrupulously clean—locker rooms being washed out daily, showers three times a day.

### Furman Resigns as VP

Gerald S. Furman recently resigned as vice-president of Gane and Ingram, Inc. and A. Maschmeijer, Jr., Inc., both of New York. He had previously been with Merck & Co., Rahway, N. J.

### New Lever Appointments

Election of William H. Burkhart as executive vice-president of Lever Brothers, New York, a newly created position, and the appointment of two other executives was announced recently by Jervis J. Babb, president. John P. Moser, general manager, manufacturing division, was elected vice-president. He has been succeeded by

Gary G. Grant, formerly production manager.

Mr. Burkhart, who has been with Lever Brothers for more than 28 years, was formerly production vice-president. Prior to joining Lever, he held executive positions with Gold Dust Corp. and Hecker Products Corp., whose soap division was purchased by Lever in 1939.

Mr. Moser has been a member of the Lever organization since 1925. In 1947 he was named general manager and treasurer of Harriet Hubbard Ayer, Inc., which Lever acquired in that year. Mr. Grant joined Lever in 1931 as a member of the research department, and has since held many important positions in the manufacturing department.

WILLIAM BURKHART



JOHN P. MOSER



GARY G. GRANT





# PINE OIL

for soaps, cleaning compounds, disinfectants  
**SMELLS CLEAN...CLEANS CLEAN**



**HERCULES POWDER COMPANY**

INCORPORATED

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NC53-2



### New D & O Detergent Odors

Some of the problems that are involved in developing perfumes for the soap and detergent industries are described in the latest issue of *D&O News*, house organ of Dodge & Olcott, New York. John Kiehl, head of the D&O research laboratory is the author. Research carried on to improve both products and methods involved in the perfuming of soaps and detergents is described. While some of this experiment is abstract, in that it deals with traditional difficulties of the industry as a whole, a large portion of it is devoted to individual research upon a particular problem of a manufacturer. Copies of the *D&O News* are available by writing to Dodge & Olcott, Inc., 180 Varick St., New York.

### C-P-P Quarterly Income Up

Colgate - Palmolive - Peet Co., Jersey City, N. J., had a net income for the first quarter of 1953 of \$3,275,000 or \$1.37 per common stock share on 2,312,000 shares outstanding. This compares with \$2,250,000 or 97 cents per share in the first quarter of 1952 on 2,202,000 shares then outstanding. The improvement in earnings, the company said, is due primarily to increased sales and foreign income offset in part by higher operating expenses.

Domestic sales for the first 1953 quarter were \$70,005,000, an increase of \$6,603,000 or 10 percent over the same period of 1952. World-wide sales, including foreign subsidiaries, totaled \$105,220,000 for the first quarter as compared with \$95,592,000 last year. Net income for the first quarter including dividend income from foreign subsidiaries for the quarter amounted to \$2,255,000, as against \$1,518,000 in 1952.

### Economic Club Hears Babb

In a speech recently delivered before the Economic Club of New York, Jervis J. Babb, president of Lever Brothers Co. New York, said that today the businessman, unlike the politician, is naturally cautious about promising more than he can deliver, but he certainly is no opponent of social progress. Business management to

day has shifted from the hands of its owners and come into the hands of the professional manager, an employee himself, Mr. Babb added. He outlined how the old fashioned dictatorship or feudal concept of governing the business part of people's lives has been largely replaced by the new "Business Republic." In this system "lies the real strength of our defense against Socialism," Mr. Babb said.

### Hoover Gets New Post

Richard M. Hoover, a member of the central purchasing department, Monsanto Chemical Co., St. Louis, recently has been assigned to the purchasing department of the company's organic chemicals division. Mr. Hoover has been with Monsanto since 1947. Formerly he was assistant supervisor in the company's John F. Queeny plant, St. Louis.

### Sharples Shifts Williams

Appointment of Richard N. Williams as sales representative in the Chicago regional sales office of Sharples Chemicals, Inc., Philadelphia, was announced recently. Mr. Williams covers the midwestern territory and makes his headquarters in St. Louis.

At the same time, the company assigned Donald C. Waterman to its New York regional office where he is currently on special assignments.

### Rules on N. J. Fair Trade

In an action brought by Colgate-Palmolive-Peet Co., Jersey City, N. J. and Lambert Pharmacal Co., St. Louis, among others, against two drug companies, the New Jersey Supreme Court recently ruled that non-signers of minimum price agreements could not be stopped from charging less than the set minimum prices. According to the decision, the state's fair trade law is not invalidated, but, minimum fair trade prices cannot be imposed unless both retailer and manufacturer sign such an agreement.

In another decision, the Supreme Court of Georgia recently held that the fair trade law of that state was unconstitutional.

### Kime Heads AOCs Meeting

J. A. Kime has been named general chairman and T. H. Hopper as program chairman of the 44th annual meeting of the American Oil Chemists' Society, held in New Orleans at the Roosevelt Hotel, May 4, 5, 6, it was recently announced. Both men are connected with the Southern Regional Research Laboratory. At the same time, it was announced that a second event in 1953 will be the short course on the engineering phases of oil seed processing at Texas A. & M. College, College Station, Tex.

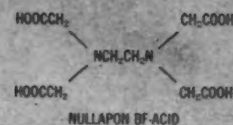
New "Fragrance Shampoo," has recently been introduced by Coty, Inc., New York, in five perfume scents: 'L'Aimant,' 'L'Origan,' 'Emeraude,' 'Paris' and 'Muguet des Bois.' Sold only through hairdressing salons, the shampoo in plastic bottle retails for \$1.50.





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capable of controlling, by deionization, undesirable  
di- or tri-valent metal ions in aqueous solution.



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	STANDARD LIQUID	CONCENTRATED LIQUID	DUSTLESS FLAKES	TECH. PURE ACID POWDER
Active* Principal	Tetra Sodium Ethylene-diamine Tetraacetate 25-27%	Tetra Sodium Ethylene-diamine Tetraacetate 38-40%	Tetra Sodium Ethylene-diamine Tetraacetate 78-80%	Ethylenediamine Tetraacetic acid (Tech. Pure) 99%
Physical Form	Clear Liquid	Clear Liquid	Non-hygroscopic Flake	Powder
Density	1.2 (10 # / gal)	1.3 (11 # / gal)	.6 (5 # / gal)	.7 (6 # / gal)
Molecular Weight of Active Ing.	380	380	380	292
100 Parts of Nullapon Controls	6.7 parts CaCO <sub>3</sub>	10.0 parts CaCO <sub>3</sub>	20.0 parts CaCO <sub>3</sub>	33.5 parts CaCO <sub>3</sub> when used in alkaline solutions
or ... 1 oz. by weight in ten gallons of water controls	49. PPM CaCO <sub>3</sub>	73 PPM CaCO <sub>3</sub>	146 PPM CaCO <sub>3</sub>	245 PPM CaCO <sub>3</sub> when used in alkaline solutions
STANDARD PACKING	500 lb. Drum 50 lb. Drum 10 lb. Drum	500 lb. Drum 50 lb. Drum 10 lb. Drum	200 lb. Drum 25 lb. Drum 5 lb. Drum	250 lb. Drum 25 lb. Drum 5 lb. Drum

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## TGA Convention

Developments and problems with cosmetic aerosols and shampoo formulation were the subjects of papers presented during the 18th annual convention of the Toilet Goods Association held at the Waldorf-Astoria Hotel, New York, May 12, 13, 14. Another paper of interest, "The action of detergent hexachlorophene mixtures on the bacterial flora of the cutaneous surface," was presented by Dr. Irving H. Blank, Harvard Medical School.

The paper on shampoo formulation was presented by H. W. Zussman, Alrose Chemical Co., Providence, R. I., while Dr. Edmond G. Young, Kinetic Chemicals Div., E. I. du Pont de Nemours Co., Wilmington, Del., spoke on "Developments and Problems with Cosmetic Aerosols."

Other papers presented during the convention included one on product research by J. A. Straka, vice-president of Colgate-Palmolive Co., Jersey City, N. J. Difficulties encountered in the use of polyethylene as a packing material was the subject of a paper prepared by C. F. Wight, J. A. Tomlinson and S. Kirmeler of van Ameringen-Haebler, Inc., New York. A paper on hygroscopic and viscosity effects of glycerine in cosmetics was given by J. B. Segur and S. C. Miner, Jr., Miner Laboratories, Chicago. The chemistry and uses of musk odorants were surveyed in the paper by Sydney M. Spatz, Ph.D., and Ernest H. Polak, Polak's Frutal Works, Middletown, N. Y.

Special papers presented at the

convention were given at a meeting of the scientific section on May 14. The convention conducted several panel discussions on May 12 and 13 on advertising, promotion and marketing of toilet goods. At a luncheon on May 13, the golf tournament committee presented trophies to the winners of matches held May 11.

## Sharples Names Two

Appointment of two men to its sales force was announced recently by Sharples Chemicals Inc., Philadelphia. Harold L. Brown, formerly a supervisor of technical service with Plaskon Corp., Toledo, O., has been assigned to the New York regional office and covers Connecticut, Manhattan and other portions of New York, Pennsylvania and New Jersey.

Norman P. Phillips, who comes to Sharples from National Aluminate Co., has been assigned to the Midwestern regional office, Cleveland, and services customers in Ohio, Kentucky and Tennessee.

## N.A.V.S. Holds Xmas Shows

Four merchandise shows of Christmas wares in five cents to \$5.00 category will be held during the summer by the National Association of Variety Stores, Chicago. The first show opens at the Baker Hotel in Dallas, and runs July 12-15; the next will be held at the Hotel La Salle, Chicago, Aug. 2-6, from there it moves to the Wm. Penn Hotel, Pittsburgh, Aug. 9-11 and then to Atlanta's Municipal Auditorium, Aug. 16-18.

## Fine Organics Agent

Fine Organics, Inc., New York recently announced the appointment of Standard Products, Inc. of Wichita, Kan., as its exclusive selling agents for its aviation-industrial line, in Kansas, Oklahoma and Missouri. Fine Organics has released through Standard Products its "Strato Line" of aviation maintenance chemicals and "F O" line of industrial maintenance chemicals.

## Waterless Skin Cleanser

New formula for a waterless skin cleanser, named "Paxsolv", has recently been announced by G. H. Packwood Mfg. Co., St. Louis. The new formula has been stabilized to overcome the tendency of waterless skin cleansers to turn to a liquid in the container. This is a tendency particularly marked in cleansers formulated to give maximum cleansing efficiency when used on a wide variety of stubborn soils and stains as resins, plastics, waxes, elastomers, inks, paints, varnishes, etc.

Another feature of the new formulation is "Miser-Mix", a quality of the compound that limits the amount used. One teaspoonful of "Paxsolv" rubbed into the hands will liquefy in less than 30 seconds, dissolving and rapidly removing the soil. If more than this amount is used, the length of time necessary to break the compound down into a liquid is increased. The new formula has a creamy texture, clear aqua color and free from unpleasant odor.

Shown below are new laboratory facilities and library located in new two story addition to the plant of Givaudan-Delawanna, Inc., Delawanna, N. J. Photo at top left shows building, completed in 1951, with the two new floors. A long view of the analytical laboratory showing laboratory assistants at work (top, center photo). Photo at extreme right shows Dr. Arthur Cade, Givaudan bacteriologist at work in the bacteriological research laboratory.

A laboratory assistant is shown at sterilizer in the rear. Bottom left is view of library with librarian in left foreground at shelves. Bottom center shows two laboratory assistants working at equipment used in analyzing aromatics. The new floors also house executive offices and engineering department. Stock room for chemical supplies and apparatus is on one new floor.





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Babassu	Olive
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Cocconut	Peanut
Corn	Sesame
Cottonseed	Soybean

**ANIMAL FATS**

Sperm Oil	Grease
Oleo Stearine	Tallow
Lard Oil	Lanolin
Neatsfoot Oil	

**FATTY ACIDS**

Red Oil	Tall Oil	Tallow
	Stearic Acid	
	Hydrogenated Fatty Acid	
	Cottonseed and Soybean	
	Fatty Acids	

**ALKALIES**

Caustic Soda, Solid, Liquid, and Flake  
Soda Ash, Light and Dense  
Carbonate of Potash, calcined and hydrated  
Calcium Chloride  
Tri Sodium Phosphate  
Tetra Pyro Phosphate  
Quadrates Granular and Beads—a stable polyphosphate for water conditioning and mild but effective detergency.

Soapers have depended on WH&C  
... for Raw Materials of Quality

SINCE 1838, we've been supplying the nation's  
"soapers" with basic raw materials.

SILICATE OF SODA—Liquid powdered and solid.

META SILICATE—"Metso"\* Granular.

METSO\* DETERGENTS—55, 66, 99.

MAYPONS—Unique surface active agents; prolific foam; high detergency and emulsifying powders; suitable for cosmetic and industrial use.

**AIR DRYETTES • CHLOROPHYLL**

\* Reg. U. S. Pat. Off., Phila. Quartz Co.

*Let us mix your dry private formulas*

*Established 1838*

*Welch, Holme & Clark Co., Inc.*

439 WEST STREET NEW YORK 14, N. Y.

Warehouses in New York and Newark, N. J.

### **P. & G. Spends Most**

Of the top 25 national advertisers in 1952, Procter & Gamble, Cincinnati, lead all others with a total expenditure of \$38,573,955 in four media: magazine, newspaper, radio and television. Colgate-Palmolive-Peet Co., Jersey City, N. J., was third with an expenditure of \$21,855,606. Lever Brothers, New York, placed fifth in the list, spending \$17,549,986.

### **Hooker Appoints Bryson**

Harry W. Bryson, Jr. has been appointed sales service representative of Hooker Electrochemical Co., Niagara Falls, N. Y., with headquarters at Tacoma, Wash., according to a recent announcement by T. E. Moffitt, western manager of the company. His activities cover service on caustic soda, chlorine and ammonia. His territory includes the Pacific Northwest states, British Columbia and Alaska. He has been employed by Hooker since 1950 in the process study group.

### **New Newport Tall Oil Plant**

Newport Industries, Inc., Pensacola, Fla. recently announced the award of a contract for the construction of a new tall oil processing plant at Bay Minette, Ala. The new plant will provide capacity for raw material from kraft paper mills in the area to be processed into a number of products used in the manufacture of soaps, lubricants, resins, paints and for other industrial uses. The estimated cost of the plant is \$2,700,000 and construction work has already started. Newport operates plants in Florida, Alabama and Louisiana.

### **New Monsanto Branch**

Monsanto Chemical Co., St. Louis, recently announced the opening of a branch office for the company's organic chemical division, and has appointed B. Baxter Pearson, manager. Mr. Pearson, who has been manager of the company's Portland branch office since 1947, was succeeded there by Paul B. Welch Jr., formerly at the Los Angeles office. At the same time, the company announced the appointment of Dr. Hal G. Johnson as director of research and development

for Monsanto's western division, with headquarters at Santa Clara. John T. Stephan was named associate director of research for the division. He succeeds Charles D. Thurmond, who is leaving the company to accept a position with another company on the Pacific coast.

### **Oakite Advertising Plans**

More than 190 newspapers, as well as women's magazines and trade journals, are being used to promote the



FRANK A. CONOLLY

Oakite line of products, Frank A. Conolly, manager of the package division of Oakite Products, Inc., New York, announced recently. Radio and television programs ranging from news programs to home economist shows and homemaking forums are also on the schedule. The drive officially launches the new, improved Oakite package.

### **Lever Ups Morris**

Appointment of Charles H. Morris to the position of Newark district sales manager was announced recently by Lever Brothers Co., New York. Mr. Morris has been with Lever Brothers Co. for 17 years.

### **Dow Office in Minneapolis**

Dow Chemical Co., Midland, Mich., recently announced the opening of a new sales office in Minneapolis to serve markets in Minnesota, the northern half of Wisconsin, and the Dakotas. The Minneapolis office now functions as a branch of the Chicago office.

### **Kearns Wins Scholarship**

Joseph L. Kearns, salesman of A. Gross & Co., New York, manufacturers of fatty acids, has recently been awarded a \$500 scholarship for advertising, publicity or marketing studies by the Advertising Club of New York. The award was given as first prize in an essay contest conducted by the Advertising Club upon completion of its course in advertising and selling.

### **Davidson on Premiums**

John Davidson, general manager, premium division, Colgate-Palmolive-Peet Co., Jersey City, N. J. was the featured speaker at a recent meeting of the New York Premium Club at the Shelburne Hotel.

A premium plan should be considered a means to an end, not an end in itself, Mr. Davidson said. "When you place a coupon on a product," he emphasized, "You should have a definite purpose in mind."

To get maximum results from a plan, it must be put to work as a selling or promotional tool, Mr. Davidson stressed. "A good premium offer can serve to increase the readership of advertising, it can help salesmen to widen a product's distribution and increase the amount of shelf and display space allotted by grocers, and it can be the factor that causes a shopper to stop at the point of sale and give the product extra consideration."

Thus, the success of a particular coupon plan must be measured in terms of its over-all effectiveness as a merchandising aid, not solely by the number of consumer requests it evokes.

"There is far more to a premium promotion than just printing a coupon, buying some merchandise, and distributing catalogs," Mr. Davidson asserted. "A successful effort requires close teamwork among premium buyer, the premium manufacturer, the merchandising manager, the advertising manager, the advertising agency, the sales manager, the salesmen, the retail dealer, and the premium mailing department."

"A properly conducted plan can stimulate a company's entire chain of distribution," he said.



# CHEMICAL USERS' GUIDE

## To General Chemical Products for the Soap and Detergent Industry

PRODUCT	AVAILABLE FORMS	COMMERCIAL STRENGTHS	SHIPPING CONTAINERS	APPLICATIONS
Sulfuric Acid $H_2SO_4$	Liquid	66° Be—93.19% $H_2SO_4$ 99% $H_2SO_4$	Carboys Steel Drums Tank Trucks Tank Transports Tank Cars	Manufacture synthetic detergents; glycerine recovery; refining oils.
Oleum $H_2SO_4 + SO_2$	Liquid	Various 10%—70% free $SO_2$	Steel Drums Tank Trucks Tank Cars	Manufacture synthetic detergents.
Sulfan® B (Stabilized Sulfuric Anhydride)	Liquid	99% $SO_2$ min.	55 gal. Steel Drums Tank Cars	Manufacture synthetic detergents.
Hydrochloric Acid $HCl + \text{water}$ (Muriatic Acid)	Liquid	18° Be (27.92%) 20° Be (31.45%) 22° Be (35.21%)	Carboys Tank Trucks Tank Cars	Glycerine recovery.
Disodium Phosphate, Anhyd. $Na_2HPO_4$	Powder Flake	96% $Na_2HPO_4$ (Equiv. 48% $P_2O_5$ )	Multiwall Paper Bags	Builder in soap and synthetic detergents.
Trisodium Phosphate $Na_3PO_4 \cdot 12H_2O$ (TSP)	Crystal	18.4%—19.0% $P_2O_5$	Multiwall Paper Bags Fibre Drums Bulk Carloads	Soap builder; alkaline detergents.
Tetrasodium Pyrophosphate, Anhyd. $Na_4P_2O_7$ (TSPP) (Pyro)	White Powder	93% $Na_4P_2O_7$ (Equiv. 52.5% $P_2O_5$ )	Multiwall Paper Bags	Builder in soap and synthetic detergents.
Sodium Tripolyphosphate $Na_5P_3O_{10}$ (Tripoly)	White Powder	90-95% $Na_5P_3O_{10}$ (Total $P_2O_5$ —56%)	Multiwall Paper Bags Bulk Carloads	Builder in soap and synthetic detergents.
Sodium Silicate $Na_2O \cdot X(SiO_2) + \text{water}$	Liquid	38° to 52° Be Various ratios of $Na_2O$ to $SiO_2$	Steel Drums Tank Trucks Tank Cars	Soap builder and filler; in synthetic detergents.
Sodium Metasilicate $Na_2SiO_3 \cdot 5H_2O$ approx.	Granules Powder	29.0% $Na_2O$	Multiwall Paper Bags Fibre Drums	Soap builder; alkaline detergents.
Salt Cake $Na_2SO_4$	Granules Powder	95% to 99.5% $Na_2SO_4$	Multiwall Paper Bags Bulk Carloads	Extender in synthetic detergents.
Sodium Sulfate, Anhydrous $Na_2SO_4$	White Granules	99.5% $Na_2SO_4$	Multiwall Paper Bags Bulk Carloads	Extender in synthetic detergents.
Aluminum Sulfate $Al_2(SO_4)_3 \cdot 14H_2O$ approx. (Alum)	Commercial and Iron Free: Lump, Granular, Powder	17.25% $Al_2O_3$	Multiwall Paper Bags Bulk Carloads	Glycerine purification.
Aluminum Chloride, Solution $AlCl_3 + \text{water}$	Liquid	50.3% $AlCl_3 \cdot 6H_2O$	Carboys Tank Cars	Glycerine purification.

The products advertised are commercial chemicals having various uses, some of which may be covered by patents, and the user must accept full responsibility for compliance therewith.

**OTHER PRODUCTS:** Sodium Thiosulfate; Sodium Sulfite; Sodium Bisulfite, Anhydrous; Sodium Difluoride; Sodium Silicofluoride.

**FOR THE LABORATORY OR SPECIAL APPLICATIONS:** BAKER & ADAMSON REAGENTS and FINE CHEMICALS

## GENERAL CHEMICAL DIVISION

ALLIED CHEMICAL & DYE CORPORATION

40 Rector Street, New York 6, N. Y.

Offices: Albany • Atlanta • Baltimore • Birmingham • Boston • Bridgeport • Buffalo • Charlotte  
Chicago • Cleveland • Denver • Detroit • Greenville (Miss.) • Houston • Jacksonville • Kalamazoo  
Los Angeles • Minneapolis • New York • Philadelphia • Pittsburgh • Providence • St. Louis  
San Francisco • Seattle • Yakima (Wash.)

In Wisconsin: General Chemical Company, Inc., Milwaukee, Wis.

In Canada: The Nichols Chemical Company, Limited • Montreal • Toronto • Vancouver





### Sonneborn Ups Schindler

Appointment of Dr. Hans Schindler as manager of the Daugherty Refinery Division, Petrolia, Pa., was announced recently by L. Sonneborn Sons, Inc., New York. He succeeds T. M. Murphy who recently retired after 49 years of service. Dr. Schindler has served in several capacities at the refinery including those of research chemist and personnel director.

### New Moore Representatives

John B. Moore Corp., Nutley, N. J. recently announced appointments of sales representatives for two new territories. Caldwell Chemical Co., 441 Lexington Ave., New York was named sales representatives for eastern New York State, New York City and Long Island. James B. Schooler Co., 2008 Baltimore St., Kansas City, Mo. was appointed for Kansas, Oklahoma and western Missouri.

At the same time, the company announced that I. Q. Sarlin has been transferred from the New York City territory to the home office as staff engineer. Sheldon Beigel has joined the company's west coast sales staff at Los Angeles.

### Detrex Names Officers

Detrex Corp., Detroit, recently announced the election of P. H. Richey as assistant treasurer and F. J. Chmielnicki as assistant secretary. After graduating from the University of Michigan, Mr. Richey joined Detrex in 1948.

Mr. Chmielnicki, a graduate of the University of Detroit, has been with the company for 11 years as counsel and as head of the Detrex legal department.

### Book on Cellulose

*Cellulose, The Chemical That Grows* by Williams Haynes, Doubleday & Company, Garden City, N. Y., 386 pages, 8½ x 5½ inches, cloth-bound, price \$4.00. This illustrated history of cellulose reports the industrial role of this material from the time of Schoenbein's discovery of the nitration process up to such modern uses as in textiles, paper, plastics and protective coatings,

and in the pharmaceutical field. The author clearly points up the impact of great personalities and of political events on the industries concerned. The text is preceded by a chronological table, starting with the year 3500 B.C., when the Egyptians made papyrus from pith of aquatic reeds and concluding with 1950, when Celanese built a dissolving pulp plant in British Colombia and U. S. rayon production exceeded a billion pounds. A glossary of technical terms and a very instructive collection of statistical and technical data in table form are appended.

### Inland Transfers Hoover

Inland Steel Container Co., Chicago, recently announced that Ralph E. Hoover has been transferred from the parent company to become manager of the container plant in New Orleans. Thomas M. Dwyer, formerly managing the New Orleans operation, is now in charge of the firm's Jersey City, N. J. plant.

### Sanitary Chemicals

*Sanitary Chemicals* by the late Leonard Schwarcz, Mac Nair-Dorland Company, New York, 576 pages, nine by six inches, cloth-bound, price \$8.00 in the U. S., \$8.50 in other countries. The original volume, *Sanitary Products*, had been partly rewritten and brought up to date at the time of Mr. Schwarcz's death. The present volume was completed by the collaboration of a group of experts in the fields concerned. *Sanitary Chemicals* is an entirely new book designed for use by anyone actively interested in manufacture, formulation, selling or use of these products. Formulation, testing, properties, history, and uses of aerosols, disinfectants, deodorants, insecticides, rodenticides, floor waxes, sweeping compounds, soaps, synthetic detergents, and surface active agents are extensively covered. The chapter concerned with labeling and packaging includes a number of specimen labels and notices of judgements under the various pertinent laws. An appendix contains essential features of the Federal Caustic Poison Act, the Federal Insecticide, Fungicide and Rodenticide Act, and a geographic list of law enforcement officials.

### Allied Appoints Waugh

Allied Chemical & Dye Corp., New York recently announced the appointment of John D. Waugh as director of information for its nitrogen division. In his newly-created post, Mr. Waugh is responsible for the information services, advertising and sales promotion activities of the division. He maintains offices at the division headquarters in New York.

### History of Per-Compounds

The history of per-compounds, which covers a period of over 150 years, is reviewed in an article by Josef Mueller in *Chemische Industrie*, Feb., 1953, page 89. The rise of these compounds from the early discovery by Alexander v. Humboldt of barium peroxide and by Thenard of "oxydized water" to their present eminence in industry is traced. Production of 15 per cent hydrogen peroxide by electrolytic process on an industrial scale began in 1911. Industrial development of hydrogen peroxide, sodium peroxide and perborate is traced from these beginnings through the two world wars to processes currently being employed in Germany and Austria.

### Dexter Appoints Scanlon

Thomas J. Scanlon recently joined the sales staff of Dexter Chemical Corp., New York, and is in charge of the sale of textile chemicals in the Philadelphia, Southern New Jersey and parts of Pennsylvania areas. He formerly was head of the Philadelphia sales dyestuff laboratory, Calco Chemical Division, American Cyanamid Co., New York.

### Calco Wins Safety Award

American Cyanamid Co., New York, recently gave its "President Award" to the Calco Chemical Division at Bound Brook, N. J., for the plant's record 6,985,294 man-hours worked without a lost time accident. The Bound Brook plant has earned this award and two other safety awards, and sets an all-time high for all 40 Cyanamid plants. A plaque symbolic of the achievement will be presented to the plant at an outdoor ceremony sometime in May.

*Build Your Soap Sales on a  
Quality Foundation with*

**GIVAUDAN  
AROMATIC CHEMICALS**

Aromatic chemicals are the basis on which you build odor appeal in your soaps.

Specify Givaudan aromatic chemicals and you are *sure* of dependable quality and wide variety. They are products of a long and highly successful research program, which has not only added many new aromatics but has also established new standards of chemical purity and olfactory uniformity.

Listed below are only a few of the hundreds of aromatic chemicals now being produced by Givaudan.

Aldehydes, Fatty: C-8 through C-12  
Amyl Cinnamic Aldehyde (Buxine®)  
Amyl Phenyl Acetate  
Amyl Salicylate  
Anisyl Alcohol  
Aubepine Liquid  
Benzophenone  
Benzyl Acetate  
Benzyl Isoamyl Ether  
Benzyl Cinnamate  
Isobornyl Acetate  
Carvacrol Technical N. P.  
Cinnamic Alcohol  
Cinnamic Aldehyde  
Citronellol and Esters  
p-Cresyl Acetate  
p-Cresyl Methyl Ether  
p-Cresyl Phenyl Acetate  
Cyclamen Aldehyde  
Dimethyl Anthranilate  
Geraniol and Esters



**Givaudan-  
Delawanna** Inc.

*Leaders in Aromatic Chemical Research*  
330 West 42nd Street  
New York 36, N. Y.

*Branches: Philadelphia • Boston • Cincinnati • Detroit  
Chicago • Seattle • Los Angeles • Toronto*

SOAP and SANITARY CHEMICALS

## Package Awards

(From Page 55)

carton, made by Container Corp. of America for Clearsite Labs., Inc., Judges tied in their scoring in this group and two first place awards were made. About the "Bloc" carton they said: "Simple and economical. . . . When all the problems the soap field presents are considered, it is a very successful carton. . . . It is legible and does its job of selling the product."

Honorable mention awards in the cosmetics class were given these eight boxes: "Shampoo Plus Egg" for Helene Curtis Industries, Inc., Chicago, by Green Bay Box Co. Kreml "Father & Son Special" for J. B. Williams Co., Glastonbury, Conn., by American Coating Mills Corp. "U. S. Male" for Avon Products, Inc., New York, by Lord Baltimore Press. "Big Top Circus Animals," for Allen B. Wrisley Co., Chicago, by Ace Carton Corp.

About this latter, strictly a soap item, the judges said: "Keeps dust from settling on soap. Protection of product with complete visibility. Good point of sale package possessing child appeal."

## Letters

(From Page 41)

day would come when these could be removed, and so stated.

My appearance in Washington, early April, 1946, was to oppose the proposal that fat quotas be relaxed for certain people and made much more stringent on others. I never heard that that Committee ever reported its investigation to Congress.

Fats and oils, WFO-42B were not decontrolled until more than six months after. President Truman unexpectedly announced Friday night, October 18, 1946, that meats, fats and oils were being turned loose. The official order on this came from the Department of Agriculture, Tuesday morning, October 22, 1946.

It is interesting to note that OPA was in a deep coma at that time,

and never regained consciousness.

Carter D. Poland  
Poland Soap Works  
Anniston, Ala.

## Butynediol Price Switch

Editor:

On page 73 of the March issue of *Soap and Sanitary Chemicals*, you very kindly printed a news item on the decrease in price of two of our chemicals, 2-butyne-1,4-diol and 1,4-butanediol. However, we would like to call your attention to the fact that an unfortunate typographical slip evidently occurred so that portion of the article applying to the butynediol price reduction appears to apply to butanediol.

The development price of 35 percent butynediol solution has been lowered to 20 cents a pound or 57 cents a pound on a 100 percent basis. The development price of 1,4-butanediol has been lowered to 60 cents.

We would appreciate it very much if it were possible to explain this to your readers.

J. Werner, director  
Commercial Development Dept.  
General Aniline Works  
General Aniline & Film Corp.  
New York

## N. E. Chem. Club

The seventh annual dinner of the Chemical Club of New England was held at the Hotel Somerset, Louis XIV Ballroom, in Boston, March 19. A filet mignon dinner and entertainment highlighted the evening's events.

Neil McElroy, left, president, Procter & Gamble Co., Cincinnati, was one of 175 U. S. business leaders who recently met with President Eisenhower, and other officials of his administration at the Ninth White House Conference of the Advertising Council, Inc. The business leaders were there to hear off-the-record views of top government officials on national and international problems and the actions advocated for their solution.



## Tall Oil

(From Page 45)

- apolis. Vol. 2, No. 4:1-4 (Summer, 1948).  
Pollak, Arthur. *Oil and Soap* 17:87-89 (1940).  
Keghel, M. de. *Pulp Paper Mag. Canada* 26, No. 16:529-531, 546, 548 (April 19, 1928).  
Lomanovich, A., and Tret'Yakova, N. *Masloboino Zhirovoe Delo* 10, No. 12:39-41 (1934).  
Hastings, R. *American Dyestuff Reporter* 33, No. 2:25-26, 50 (Jan. 17, 1944).  
Hyde, Elmer H. U. S. Patent 1,882,618 (Oct. 11, 1932).  
Stresen-Reuter, Frederick A., and Rimpila, Charles. U. S. Patents 2,175,489; 2,175,490; 2,175,491 (Oct. 10, 1939).  
Curran, Alton F. U. S. Patent 2,107,289 (Feb. 8, 1938).  
Kranich, Herbert. *Soap & Sanitary Chem.*, 33-35 (Nov., 1947).  
Young, C. B. F., and Coons, K. W. "Surface Active Agents," New York Chemical Publishing Co., 1945.

## Latin America Market Best

Colombia, Peru, and Venezuela represent, at present, are the best Latin America market potentials for U. S. manufacturers, John L. Cassullo, president of Dodge & Olcott, Inc., New York, reported recently. Mr. Cassullo recently returned from an extensive trip to South America and found that in these three countries exchange is available, and natural resources are being developed which will create the dollar balances necessary for trade with the U. S. In addition to the three countries mentioned, he found that in Brazil there are a number of Brazilian concerns engaged in the manufacture of essential oils.

The preferred detergent for laundries, rug cleaners, institutions



# SULFRAMIN<sup>\*</sup> HD BEADS

THESE HIGH DETERGENT BEADS ASSURE MOUNTAINS OF SOAP-LIKE SUDS FOR YOUR CUSTOMERS...PROFITS FOR YOU!

Sulframin HD Beads — in spray dried form — are setting a new high standard for detergents in the restaurant and institution field.

Sulframin HD Beads assure customer satisfaction, good profits and a steady repeat business for you.

In laundry work, the thorough wetting, powerful detergency and free rinsing qualities of Sulframin HD Beads will please your customers, assure you of repeat business.

Produced in accordance with a balanced formula, containing dodecyl benzene sulfonate, complex phosphates, CMC, and a great white dyestuff, Sulframin HD Beads assure economical performance, even in hardest water.

Packed for your convenience in 130 lb. drums, 90 lb. drums, or 50 lb. bags.

SEND FOR FREE SAMPLE AND FULL DETAILS ON PROFITABLE SULFRAMIN HD BEADS TODAY!



ULTRA CHEMICAL WORKS, INC.

Joliet, Ill.  
Paterson, N. J.  
Hawthorne, Calif.

<sup>\*</sup>Trade Mark Reg.





**HILTAMINE**

*a brand new optical  
brightener for soaps*

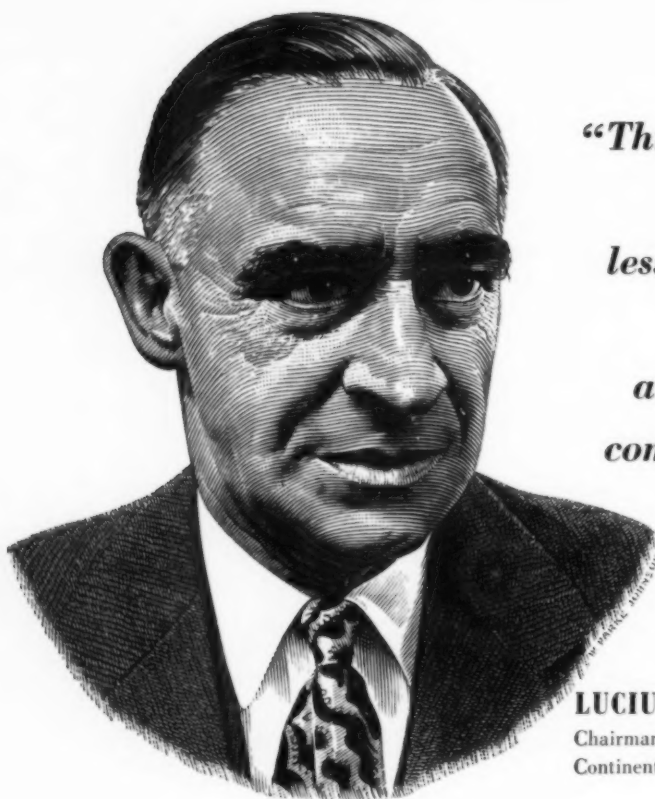
# arctic white n

*extremely substantive to  
nylon, wool and acetate*

Hiltamine arctic white B substantive to cotton and rayon



**THE HILTON-DAVIS  
CHEMICAL CO. DIV.**



***"Thrifty citizens . . .  
with Savings Bonds . . .  
less likely to be taken in  
by the false promises  
and ideologies of  
communist propagandists . . ."***

**LUCIUS D. CLAY**

Chairman of the Board  
Continental Can Company

***"The regular purchase of Savings Bonds through the Payroll Savings Plan by millions of our citizens contributes importantly to the country's economic stability, the national defense effort, and to the financial independence of the individual. The thrifty, self-reliant citizen is one far less likely to be taken in by the false promises and ideologies which communist propagandists invariably direct to the 'have nots'."***

- To thousands of company executives, accountants, payroll department employees, PSP means Payroll Savings Plan, the simple payroll allotment operation through which employees make a monthly investment in U. S. Savings Bonds.
- To almost eight million employees of nearly 50,000 companies, PSP has a more intimate connotation. To them, PSP spells *Personal Security Plan*.
- Multiply the personal security of a single Payroll Saver by 43,000,000—the number of individuals who hold Savings Bonds having a cash value of \$49.5 billion—and you have economic stability that is the keystone of our national defense.
- Thanks to the thousands of companies which offer their employees the Payroll Savings Plan, Bill Brown in the Machine Shop . . . Joe Green in the boiler room . . . and eight million more Browns and Greens can well turn a

deaf ear to "... the false promises and ideologies . . ." of communist propagandists. Bill can see his new home taking shape in his growing stack of Savings Bonds . . . Joe sees each bond another step toward a college education for little Joe . . . and the "Old Timer," who eats his lunch with Bill, talks of "sitting down pretty soon" because his Bonds will make a nice addition to his Social Security.

- PSP holds still another benefit—this one for the employer. Payroll Savers are conscientious workers. Statistics show that absenteeism goes down, production improves and accidents decrease as payroll participation goes up.
- If employee participation in *your* Payroll Savings Plan is less than 50%—or if your company does not have a Payroll Savings Plan—get in touch with Savings Bond Division, U. S. Treasury Department, Washington Building, Washington, D. C. Learn how easy it is to help your country, your employees and your *company*—through the PSP.

*The United States Government does not pay for this advertisement. It is donated by this publication in cooperation with the Advertising Council and the Magazine Publishers of America.*

**SOAP and SANITARY CHEMICALS**



# Bids and AWARDS

## Navy Soap Bid

Laundry soap, 108,000 pounds for a, Norfolk, and b, Oakland, was included in a recent opening for miscellaneous supplies by Navy Purchasing Office, New York. Colgate-Palmolive-Peet Co., Jersey City, was lowest bidder on item (a) with 4.817 cents, Newport Soap Co., Oakland, Calif., on item (b) with 4.51 cents.

## FSS Award to Union Paper

The award on 400 containers of sweeping compound included in a recent opening for miscellaneous supplies by Federal Supply Service, Cleveland, was won by Union Paper & Twine Co., Cleveland with a bid of \$2.25 per drum.

## Disinfectant Awards

In a recent opening for miscellaneous supplies by the Wright-Patterson Air Force Base, Dayton, Fine Organics Inc., New York, won the award on 800 gallons of disinfectant with a bid of \$2.00 and Ace Janitor Supply, Dayton, on 330 gallons of disinfectant with \$1.21.

## Award to Gem Products

In a recent opening for miscellaneous supplies by the Federal Supply Service, Dallas, the award on 1,200 cartons of soap powder was won by Gem Products, Dallas, with a bid of 39.38 cents.

## FSS Award to Gen. Chem.

The award on 132,300 pounds of DDT powder in a recent opening for miscellaneous supplies by Federal Supply Service, Washington, D. C., was won by General Chemical Division, Allied Chemical & Dye Corp., New York, with a bid of 26.88 cents, alt. 26.48 cents in 150-pound drums.

## VA Shaving Cream Bid

A recent opening for miscellaneous supplies by the Veterans Administration, Washington, D. C., included brushless shaving cream, item 1, 2,352 dozen tubes and item 2, 168 dozen tubes. Lowest bids were sub-

mitted by Comfort Manufacturing Co., Chicago, on item 1, 93 cents and on item 2, 98 cents.

## AF Award to Hollingshead

R. M. Hollingshead Corp., Camden, N. J., won the award on cleaning compound, 30,700 gallons (item 1) and 259,700 gallons (item 2) in a recent opening for miscellaneous supplies by the Air Force Base, Topeka, Kans. The bid was: on item 1, 67.96 cents per gallon on 22,700 gallons, and 70.13 cents per gallon on 8,000 gallons; on item 2, 57.6 cents per gallon; representing a total of \$170,624.52.

## Lever, Swift, Newport Bid

Soap powder, item 1, 200,000 pounds packed in 100-pound drums, and item 2, 72,000 pounds packed in five-pound cartons, for a, Oakland and b, Norfolk, was included in a recent opening for miscellaneous supplies by the Federal Supply Service, New York. Lever Brothers, New York, submitted the lowest bid of 6 cents on item 1; Newport Soap Co., Oakland, Calif., bid 7.81 cents on item 2a, and Swift & Co., Chicago, 7.99 cents on item 2b.

## Navy Grit Soap Bid

In a recent opening for miscellaneous supplies by Navy Purchasing Office, New York, appeared 236,000 pounds of grit soap, on which low bids were submitted by Day & Frick, Philadelphia; Kamen Soap Products, New York; Murro Chemical Co., Portsmouth, Va., and others.

## Detergent Award

In a recent opening for miscellaneous supplies by the Federal Correctional Institution, La Tuna, Tex., the award on detergent went to Washington Chemical Co., Washington, D. C., with a bid of 9.5 cents.

## Wins FSS Award

Sanitary Soap Co., Paterson, N. J., won the award on 210,000 pounds of sweeping compound with a

bid of 2.32 cents per pound in a recent opening for miscellaneous supplies by Federal Supply Service, Washington, D. C.

## Polish Award to Trio

The award on 3,000 gallons of metal polish in a recent opening for miscellaneous supplies by the Post Office Department, Washington, D. C., was won by Trio Chemical Works, Inc., Brooklyn, with a bid of 47 cents.

## Low Soap Powder Bid

Soap powder, 65,400 pounds, for a, Newport, b, Bayonne, c, Norfolk, d, Charleston, e, San Diego, f, San Pedro, g, Oakland, h, Seattle, and i, Bremerton, was included in a recent opening for miscellaneous supplies by the Federal Supply Service, New York. The lowest bid by Clarkson Laboratories, Philadelphia, was: a) 14.06 cents, b) 13.31 cents, c) 13.61 cents, d) 14.61 cents, e) 15.7 cents, f) 14.96 cents, g and h) 14.71 cents, and i) 16.1 cents.

## Navy Insecticide Bid

A recent opening for miscellaneous supplies by the Navy Purchasing Office, New York, included 23,000 gallons of insecticide for a, Boston, b, Brooklyn, c, Norfolk, d, Cherry Point, e, Great Lakes, f, Long Beach, g, Oakland, and h, Seattle. Rohm and Haas Co., Philadelphia, submitted the lowest bid of \$2.79 for destination a. Onyx Oil and Chemical Co., Jersey City, submitted lowest bids of \$2.80 on destination b, \$2,8017 on c, \$2.869 on d, \$3.155 on f, and \$3.0614 on g and h; and Gallowhur Chemical Co., New York, \$2 on destination e.

## Low Bid by Central Chem.

A recent opening for miscellaneous supplies by the Navy Purchasing Office, New York, included DDT powder, item 1, 74,400 pounds in five-pound cans, and item 2, 44,000 pounds in 25-pound containers, for a, Norfolk, b, Pensacola, c, Great Lakes, Central Chemical Corp., Lebanon, Pa., submitted lowest bids on item 1, all destinations, 30.4 cents, and on item 2a, 28.5 cents.



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*fresh  
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# NEW Trade Marks

**T**HE following trade marks were published in recent issues of the *Official Gazette* of the U. S. Patent Office in compliance with section 12(a) of the Trade Mark Act of 1946. Notice of opposition under section 13 may be filed within 30 days of publication in the *Gazette*. See rules 20.1 to 20.5. As provided by section 31 of the Act, a fee of \$25 must accompany notice of opposition.

**Prev**—This for chemical compound in powder, paste, or liquid form for emulsifying and dispersing oil, grease, and solvents. Filed Feb. 8, 1952 by Essential Chemicals Co., Milwaukee. Claims use since Oct. 23, 1951.

**Singer**—This for petroleum derivatives for use in cleaning metallic machine elements. Filed May 23, 1952 by the Singer Manufacturing Co., Elizabeth, N. J. Claims use since 1946.

**Nylonu**—This for household bleach, having incidental detergent properties. Filed Aug. 13, 1952 by American Brands Co., Richmond, Va. Claims use since July 11, 1952.

**Spe-de-shine**—This for metal polish. Filed Mar. 22, 1951 by Cleanola Co., Pittsburgh. Claims use since Jan. 1, 1902.

**Car Plate**—This for cleaning and polishing preparation for automobiles. Filed Oct. 6, 1952 by S. C. Johnson & Son, Inc., Racine, Wis. Claims use since Jan. 23, 1950.

**Sage Savers**—This for insecticide and mothproofing agents. Filed Mar. 6, 1952 by Sage Laboratories, New York. Claims use since Feb. 2, 1952.

**X-4**—This for liquid bactericide for sanitizing dairy and food handling equipment. Filed Mar. 13, 1952 by Klenzade Products, Inc., Beloit, Wis. Claims use since Dec. 1, 1941.

**Vipol**—This for pine oil and coal tar disinfectants. Filed May 1, 1952 by Vineland Poultry Laboratories, Landis Township, Cumberland County, N. J. Claims use since Mar. 30, 1946.

**Q.A. #25**—This for disinfectants and germicides for household and industrial use. Filed July 9, 1952 by Chem-Co., Baltimore, Md. Claims use since Mar. 15, 1949.

**Banapest**—This for insecticide. Filed Aug. 11, 1952 by American Scientific Laboratories, Inc., Madison, Wis. Claims use since July 7, 1952.

**Methonium**—This for antiseptic and anti-bacterial solution for treatment of textiles. Filed Oct. 8, 1952 by Benson-Nuen Laboratories, New York. Claims use since Sept. 8, 1952.

**Air-gene**—This for room de-

odorant. Filed Oct. 24, 1952 by Bostwick Laboratories, Inc., Bridgeport, Conn. Claims use since June 4, 1951.

**Silent Death**—This for chemical preparation to be used as a rat and mouse killer. Filed Nov. 20, 1951 by Emmett L. Fox, Brooks, W. Va. Claims use since Aug. 20, 1951.

**Phygon Naugets**—This for fungicides in pelletized form. Filed Jan. 10, 1952 by United States Rubber Co., New York. Claims use since Jan. 71, 1951.

**Atomist**—This for insecticide. Filed Feb. 13, 1952 by Reefer-Galler, Inc., New York. Claims use since Jan. 29, 1952.

**Fel**—This for insecticide. Filed Feb. 13, 1952 by Reefer-Galler, Inc., New York. Claims use since Jan. 29, 1952.

**Warcin**—This for rodenticide. Filed Apr. 17, 1952 by Warcin Co., Chicago. Claims use since Apr. 4, 1952.

**Mr. X**—This for weed killer. Filed Nov. 17, 1952 by Spencer Chemical Co., Kansas City, Mo. Claims use since Oct. 30, 1952.

**LaViola**—This for shaving cream. Filed Dec. 6, 1950 by Lovins Laboratories, Denver. Claims use since Dec. 3, 1932.

**Laundry D-Flex**—This for combination soap and synthetic washing powder. Filed Feb. 15, 1949 by Essential Chemicals Co., Milwaukee. Claims use since June 3, 1948.

**C-33**—This for painted wall and woodwork cleaner. Filed July 7, 1951 by Earl Grissmer Co., Indianapolis, Ind. Claims use since Jan. 15, 1951.

**Jot**—This for soaps and shampoos. Filed March 11, 1952 by Galen Laboratories, Pittsburgh. Claims use since Aug. 1, 1950.

**Parcolite**—This for phosphatic preparation for application to metal surfaces for cleaning and forming a permanent coating thereon. Filed Mar. 12, 1952 by Parker Rust Proof Co., Detroit. Claims use since July 23, 1931.

**Zinomix**—This for stone cleaner in powder form. Filed Mar. 15, 1952 by Chas. V. Zink & Sons, Detroit. Claims use since Dec. 12, 1951.

**Ulmophen**—This for detergent preparation. Filed May 1, 1952 by Physicians and Hospital Supply Co., Minneapolis. Claims use since Feb. 14, 1952.

**Mercury Compound Formula Hand Cleaner**—This for cleaning the hands. Filed No. 22, 1950 by Theobold Industries, Kearny, N. J. Claims use since July 15, 1940.

**Pur Wax**—This for powdered wax for use as an ironing lubricant. Filed Dec. 16, 1950 by R. Lally Co., Evanston, Ill. Claims use since Nov. 1, 1949.

**Pivalyn**—This for insecticides and rodenticides in liquid and solid

form and plastic pellets having water soluble insecticide and rodenticide material deposited on the surface thereof. Filed No. 15, 1952 by Montomoco, Inc., New York. Claims use since Aug. 20, 1952.

**Tidyskin**—This for hand cleaner. Filed July 22, 1950 by La Peer Products Co., Los Angeles. Claims use since July 14, 1950.

**Packard**—This for fabric and metal cleaner. Filed Dec. 7, 1948 by Packard Motor Car Co., Detroit. Claims use since 1923.

**Beautiful Hair Breck**—This for soap shampoos in cake form. Filed Aug. 30, 1949 by John H. Breck, Inc., Springfield, Mass. Claims use since May 26, 1949.

**Premium**—This for soap. Filed Feb. 13, 1951 by Consolidated Rendering Co., Boston. Claims use since Jan. 1901.

**Carburex**—This for liquid detergent for cleaning by immersion automobile carburetor parts. Filed July 17, 1951 by Du Bois Co., Cincinnati. Claims use since Apr. 28, 1950.

**Mothprotexed**—This for cleaning and treating blankets to render them moth repellent. Filed Nov. 13, 1948 by Morey LaRue Laundry Co., Elizabeth, N. J. Claims use since May 21, 1948.

**Alkalume**—This for metal cleaning compound for magnesium and aluminum alloys. Filed Dec. 15, 1951 by Northwest Chemical Co., Detroit. Claims use since Dec. 3, 1941.

**Had-A-Mouse**—This for rodenticides. Filed Jan. 2, 1952 by Had-A-Mouse Co., Decatur, Ill. Claims use since Oct. 4, 1951.

**Penthanco**—This for liquid insecticides and space sprays. Filed May 24, 1952 by S. B. Penick & Co., New York. Claims use since about June 1947.

**Peter Pan**—This for refinishing leather. Filed Oct. 17, 1952 by Mercury Chemical Corp., Chicago. Claims use since June 19, 1952.

**Breck pH 8 Lather Oil Shampoo**—This for shampoo. Filed Dec. 9, 1949 by John H. Breck, Inc., Springfield, Mass. Claims use since Aug. 2, 1932.

**Shyco Lanolin Soap**—This for soap, namely a lanolin soap having bacteriostatic properties. Filed Oct. 8, 1951 by Physicians and Hospitals Supply Co., Minneapolis. Claims use since Sept. 14, 1946.

**Fedway**—This for hand and bath soaps, laundry soaps, soap flakes and powders. Filed Feb. 13, 1952 by Federated Department Stores, Inc., Cincinnati. Claims use since Jan. 4, 1952.

**Ah-co-gent**—This for all purpose cleaner. Filed Apr. 21, 1952 by Apothecaries Hall Co., Waterbury, Conn. Claims use since 1930.

**Korex**—This for germicidal cleaner having disinfecting and deodorizing properties. Filed May 10, 1952 by Huntington Laboratories, Inc., Huntington, Ind. Claims use

(Turn to Page 210)

# FLORASYNTH SPECIALS

## SHAMPOO ODORS

OIL BOUQUET H.O. No. 8267 Water Soluble  
OIL BOUQUET APPLE BLOSSOM No. 8240  
OIL BOUQUET ALMOND No. 8262 Water Soluble  
OIL CLOVER No. 888

## SOAP ODORS

OIL MIMOSA No. 615  
OIL BOUQUET S No. 61  
OIL JASMIN No. 613  
OIL BOUQUET C No. 613  
OIL BOUQUET F. L. No. 300

## For LIQUID SOAP

OIL BOUQUET E.C. No. 618  
OIL BOUQUET E.T. No. 618  
OIL HONEYSUCKLE No. 61  
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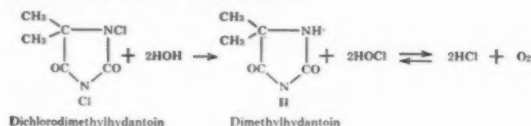
## Development News

### Unusual stability offered in HALANE, Wyandotte's new chlorine-liberating compound

Wyandotte's HALANE (1, 3-dichloro-5, 5-dimethylhydantoin) shows considerable promise for those applications where a powdered, chlorine-liberating compound of unusual stability is required, as in household laundry bleaches. The experimental data given here may assist you in determining how to use HALANE in your own operations. Although HALANE is still quite new, our laboratories are constantly obtaining additional information which we will be glad to share with you. Your inquiries are always welcome.

#### CHEMICAL PROPERTIES

Many of the applications of HALANE depend on the formation of hypochlorous acid with subsequent liberation of oxygen as shown in the following equation:



#### PHYSICAL PROPERTIES

Form	Powder	Solubility:			
Color	White				
Molecular Weight	197.03	Solvent	Temp., °C	Sol., g. 100g.	
Moisture, maximum %	0.5	Water	25	0.21	
Active Chlorine, min. % by wt.	33.0	Water	60	0.60	
"Available Chlorine", min. % by wt.	66.0	Methylene Chloride	15	39.0	
Melting Point, °C.	130.0	Chloroform	25	14.0	
Density, 20°C.	1.5	Carbon Tetrachloride	25	1.2	
Bulk Density, lbs. cu. ft.	30-40	Ethylene Dichloride	30	32.0	
Particle Size Distribution:		Trichloroethylene	25	6.8	
Through 10 mesh screen	all	Perchloroethylene	25	1.0	
Retained on 100	74%	n-Tetrachloroethane	25	17.0	
Through 100 on 200	17%	Pentachloroethane	20	5.0	
Through 200 on 325	8%	Benzene	25	9.2	
Through 325	1%	Toluene	25	6.0	
		o-Dichlorobenzene	20	5.0	
		Trichlorobenzene	20	5.0	

#### STABILITY

Even when contaminated, HALANE minimizes the problem of explosions common in oxygen-liberating compounds. Table\* below shows temperature, in °C., for spontaneous decomposition of HALANE and other oxygen-liberating compounds:

	Decomposition Temperature, °C.					
	UNCONTAMINATED	1% CONTAMINANT				
		Wood	Oil	Grease	Soap	Starch
HALANE	212 (1)	193 (1)	215 (1)	218 (1)	204 (1)	186 (1)
Calcium Hypochlorite	173 (2)	173 (3)	135 (9)	162 (3)	170 (7)	171 (5)
Chloramine T	130 (2)	147 (4)	130 (4)	130 (2)	131 (4)	153 (6)
Trichloromelamine	171 (4)	171 (4)	140 (6)	145 (4)	166 (6)	176 (4)
Sodium Perborate	85 (1)	—	—	—	—	—
Sodium Chlorite	166 (7)	—	—	—	—	—

Nature of decomposition in above table is indicated as follows:

- |   |                                      |
|---|--------------------------------------|
| (1) Very mild decomposition without flame | (5) Rapid decomposition with flame   |
| (2) Slow decomposition without flame      | (6) Mild detonation without flame    |
| (3) Slow decomposition with flame         | (7) Mild detonation with flame       |
| (4) Rapid decomposition without flame     | (8) Violent detonation without flame |
|   | (9) Violent detonation with flame    |

\*Details of test procedure will be supplied upon request.

HALANE is also stable in storage, losing very little of its available chlorine content at 140°F. Comparison data for HALANE and common bleaches is shown below:

	Available Chlorine or Oxygen Content, %				% Loss
	Initial	3 Weeks	10 Weeks	14 Weeks	
HALANE	68.3	67.9	67.6	67.3	1.5
Calcium Hypochlorite (70%)	74.9	67.6	53.4	46.8	37.5
Calcium Hypochlorite (50%)	47.7	38.6	25.1	18.1	62.1
Calcium Peroxide (60%)	12.7	12.1	11.8	11.5	9.4
Hypochlorite-Soda Mix	33.3	31.9	29.3	30.0	9.9
Sodium Borate Perhydrate	15.9	15.9	15.6	14.8	6.9

#### APPLICATIONS

These uses of HALANE are given as illustrations and suggestions. No representation or warranty of freedom from legal liability, including patent liability, incident to its use is made by Wyandotte Chemicals Corporation.

Extensive laboratory experiments demonstrate the suitability of HALANE as a laundry bleach. Loss of available chlorine from dry HALANE is very slow and there is no potential danger of explosion as in some bleaching compounds.

HALANE can be added in powdered form directly to the washer. Likewise, tests show the decrease in tensile strength of fabrics bleached with HALANE is very much less than that resulting from the use of common bleaches. Bleaching effectiveness of solutions of HALANE increases with an increase in temperature, time, and available chlorine concentration.

The properties of HALANE indicate its possible suitability for the shrinkproofing of wool; sterilizing ion-exchange resin beds; sterilizing paper and pulp against microbiological attack; use as a rubber bonding ingredient; chemical intermediate for amino acids, drugs, insecticides; use in extreme pressure lubricants, germicidal rinse compositions and in odor removal for organic products.

#### STORAGE

Aqueous solutions of HALANE can be stored or used in ceramic, stainless steel, glass, monel or rubber containers. In dry form, HALANE can be stored in fiber or metal containers coated with a suitable resin. For relatively short periods, it can even be stored in ordinary cardboard, but longer storage requires that the cardboard be treated with a wax or a resin.

#### CORROSION

In dry form, HALANE is essentially noncorrosive. However, in the presence of moisture, corrosiveness increases considerably. Care should be taken to use suitable containers and equipment in handling this product.

Corrosiveness of HALANE solutions is directly related to pH. At pH values of 7.5 and above, HALANE has no important corrosive effect on copper, bronze, monel, stainless steel, galvanized iron or dairy metal. Determinations made at a pH of 5 show increased corrosion on all metals but is not excessive on monel and stainless steel. At a given HALANE concentration, the corrosive effect on cold rolled steel increases moderately with increasing temperature over the range 40-110°F and rises sharply above 110°F.

#### AVAILABILITY

HALANE is available in multi-drum quantities. Larger orders can be handled on reasonable notice. Just fill in and mail coupon below for your free samples, data sheets and price schedules. Wyandotte Chemicals Corporation, Development Department, Wyandotte, Michigan.



# Wyandotte

## CHEMICALS

#### Development Department

Wyandotte Chemicals Corp., Wyandotte, Mich.

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and information on use of HALANE in \_\_\_\_\_

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CARBONATE OF POTASH  
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TRITON X-100, Rohm & Haas nonionic detergent, is unique in its ability to perform these two functions simultaneously on a wide range of surfaces. Because it is able to wet many materials *preferentially* it quickly displaces soil from them. As fast as the soil is removed it is dispersed—and held in suspension. Resoiling of the surfaces being cleaned—such as silverware, glasses, floors, enameled metal, chinaware, walls or metal parts, is thus held to a minimum.

The photograph shows the results of a "Dynamic Detergency Test" comparing TRITON X-100 with an anionic and a cationic on a representative metal substrate. TRITON X-100 removes the soil and holds it in suspension; the substrate is sparkling clean. The anionic is less effective as a soil remover. The cationic has removed some soil but has allowed its redeposition on glass. Results from similar tests on a number of substrates are tabulated at right.

The laboratory results obtained with the Rohm & Haas Dynamic Detergency Test have been confirmed in practice. Satisfied users know that TRITON X-100 does its cleaning job with a high degree of effectiveness on many different surfaces. Among them are the following: Aluminum, brass, ceramic tile, copper, enamel, glass, hard rubber, linoleum, steels (cold rolled, furniture, stainless, phosphatized, rust proof), and zinc.

TRITON is a trademark Reg. U.S. Pat. Off. and in principal foreign countries.



The outstanding over-all efficiency of TRITON X-100 in cleaning so many different kinds of surfaces highlights its versatility. Manufacturers of metal cleaners, janitorial supplies, laundry detergents, restaurant and household cleaners and similar products will benefit by writing us for additional information on TRITON X-100.

## CLEANING EFFICIENCY

(Dynamic Detergency Test\*)

	TRITON X-100	ANIONIC	CATIONIC
REMOVAL OF SOIL			
Glass	90%	73%	15%
Ceramic Tile	83	53	12
Mild Steel	82	35	58
Brass	78	34	46
Aluminum	72	22	70
Linoleum	64	26	20
Melamine Plastic	59	25	22
PREVENTION OF REDEPOSITION			
Glass	99%	98%	20%
Ceramic Tile	97	87	12
Mild Steel	93	78	92
Brass	90	68	70
Aluminum	97	74	77
Linoleum	90	60	24
Melamine Plastic	81	39	58

\*Refer to Soap & Sanitary Chemicals 29 (2) 46, 1953, or write Rohm & Haas Company for reprint of article "Nonionics—The All-Surface Cleaners".

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Acid Value .....	191 — 195
Saponification Value .....	192 — 196
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Century 1020 — White Oleic (U.S.P.) .....	Titre 8 — 10°C
Century 1005 — Distilled Oleic .....	Titre 3 — 5°C
Century 1010 — Distilled Oleic .....	Titre 8 — 10°C



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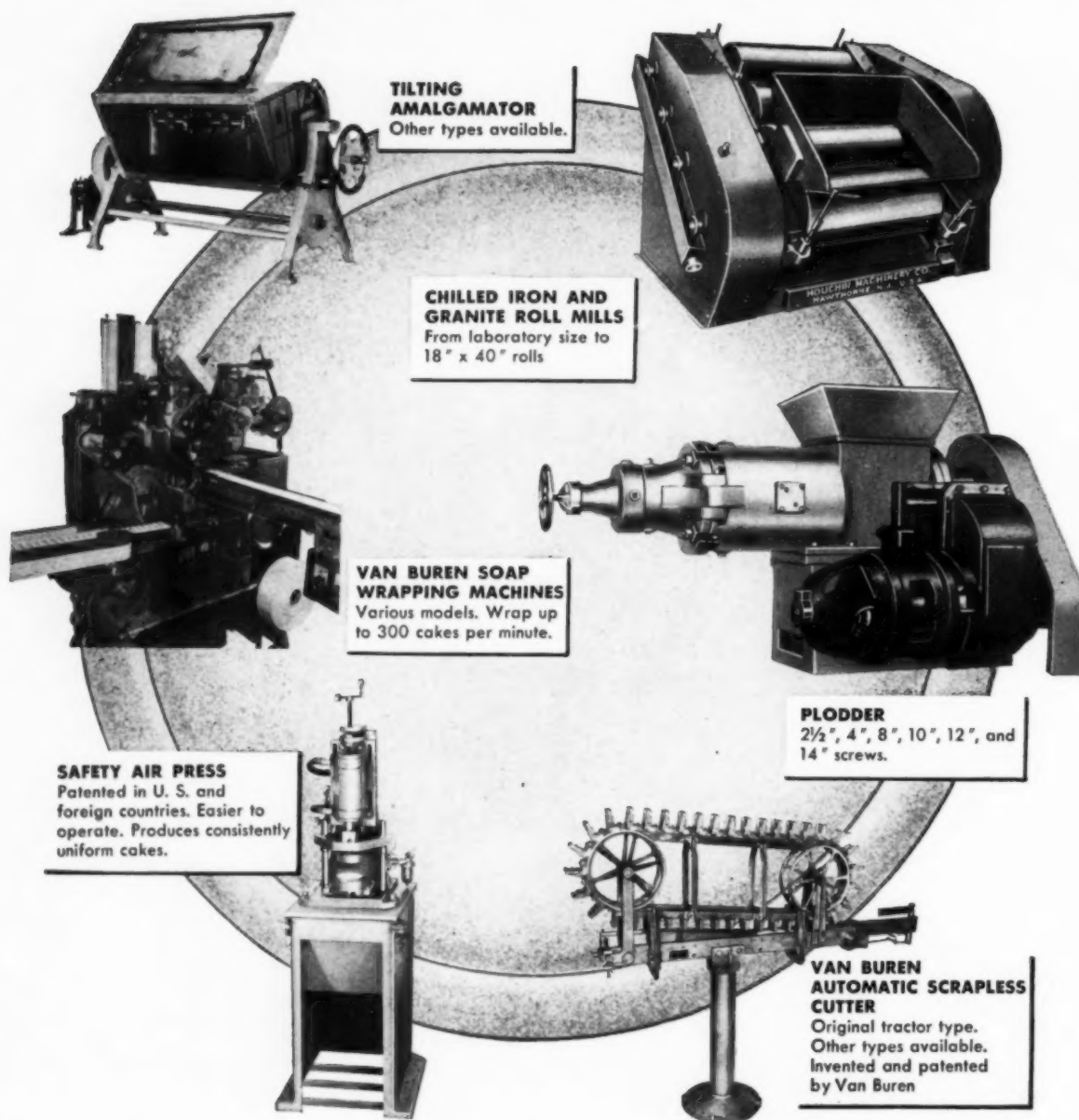
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Even small additions of fatty or fat-like substances such as lanolin, spermaceti, petrolatum, and waxes reduce the quantity of lather, but sometimes increase its creaminess. Substances such as tallow and vegetable oils are not included in this group, because they cause rancidity.

Lecithin, fatty alcohols, glycerin mono-stearates, and other fat-like emulsifiers, are capable of increasing volume as well as creaminess.

Newer additives, such as "Tylose", "Zelluton", "Rohagit", polyvinyl alcohol and polyglycols act as foam improvers when used at the rate of 0.5 to one percent of pure soap. Larger amounts, especially of the first two compounds, do not impair the cleansing action, and may even improve it, but they do not always make for copious lather.

Most synthetic detergents, formerly erroneously called soap substitutes, can hardly compete with a potassium-coconut oil soap when lather is to be produced by manual rubbing action. Admittedly there are some newer detergents which do yield copious lather under such conditions, but mostly such lather is composed of large bubbles and shows poor stability. Sometimes such products form a dense lather with small quantities of water, but the addition of more water and/or the lapse of a few seconds and the large bubbles return.

Combinations of these new

foaming agents are even less predictable in their results than are combinations of soaps. Two foaming agents of similar chemical type generally behave according to theoretical probability. The simplest examples are sodium and triethanolamine lauryl alcohol sulfonates. An almost equally simple case is a mixture of sodium lauryl alcohol sulfonate and sodium oleyl sulfonate. The slightly loose but copious lather of the first gains in density and stability by addition of 10 to 30 percent of the second, while washing power is increased. Numerous possible variations in the fatty acid derivative, in the base, (sodium, ammonium, potassium, and triethanolamine and other alkylamines) and in proportions, exist even when similar foaming agents are combined.

Results of combining two good foaming agents of dissimilar chemical derivation are far more difficult to predict. According to the proportions used, there may be a striking decrease, an insignificant weakening or a certain increase of foaming power. But the effect is never as dramatic as that produced by 20 percent coconut oil soap upon 80 percent tallow soap.

With regard to the proportions, sometimes half and half is the most favorable percentage; at other times this proportion can yield poor results. The safest principle is that of preponderance in which one foaming agent is used at the rate of 80 to 98 percent and the second at a 20 to two percent ratio.

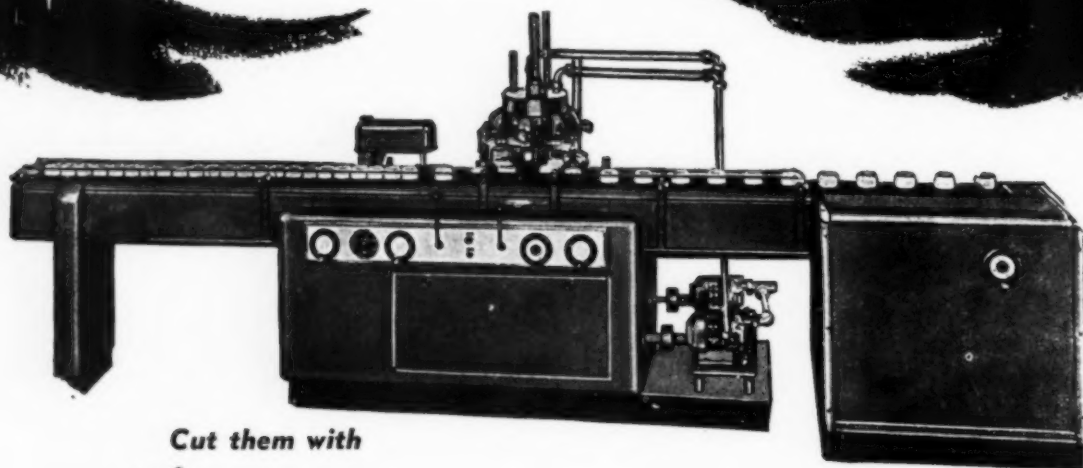
What happens when two detergents are used cannot clearly be foreseen. This uncertainty is greatly increased by the use of three or more foaming agents. Exact knowledge of the components and the usual methods of foam measurement help. But the final evaluation can only take place through a series of handwashing experiments, although these can lead to subjective fallacies, based on such variables as fatty coating of the skin, perspiration, and traces of previously applied foaming agents.

A carefully chosen combination of equal parts of a fatty alcohol sulfonate, a fatty acid condensation product, and an alkyl aryl sulfonate, can produce better results than the use of any one of these compounds. But the principle of preponderance is still recommended as involving fewer risks. Several series of triple combinations, applying this principle in various proportions, are suggested for practical testing.

A small percentage of saponin added to the soap produces good results because of saponin's compatibility with soap. But in combinations of soap with synthetics, unforeseeable complications can result. Even a small amount of an incompatible additive can reduce the lather significantly. Again the principle of preponderance is recommended: soap usually can take a few percent of foaming agent ranging from turkey red oil which foams slightly to profusely foaming phenyl sulfonate.

**New additives to raise quantity and quality of lather of soaps consist of polyglycols and polyvinyl alcohol. They do not impair cleansing action, but sometimes even improve it.**

DON'T LET HIGH PRODUCTION  
COSTS EAT YOU UP!!



Cut them with

**Kiefer**

## VARI - VISCO FILLING MACHINE

COSMETICS, SALVES, CREAMS,  
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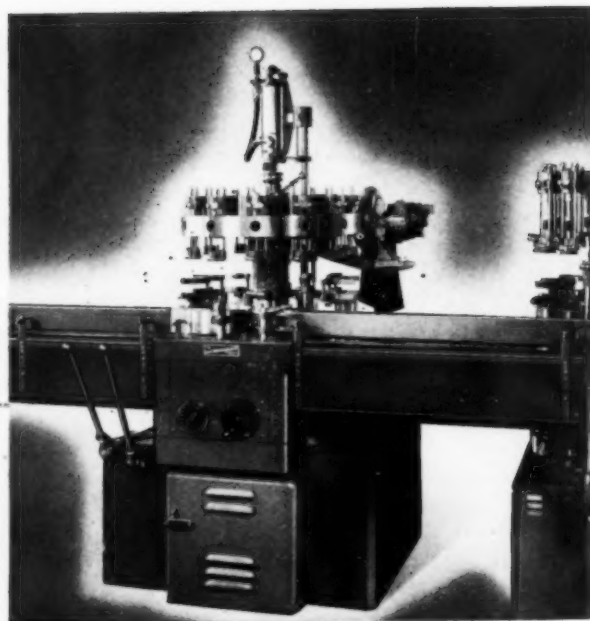
This fine equipment does the job quickly and precisely. From morning until night, it sends out a steady stream of perfectly filled jars, bottles, tins, polyethylene containers.

Simply the turn of one handwheel will at once regulate filling volume; with another you dial the speed.

— clean 'em clean, with the

## KIEFER ROTARY AIR CLEANER

Glassware "comes clean" when this machine is on the job and we do mean clean! Cleaned while upright. A rapid job, a thorough job! The Kiefer Bottoms-Up Cleaner if you prefer the inverting action.



*The Karl Kiefer Machine Co.*

CINCINNATI, U. S. A.

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Completely automatic, semi-automatic, hand-fed equipment to clean, fill, close, convey jars, bottles, tins, collapsible tubes.



The foregoing discussion applies exclusively to foaming power. The effect of foam improvers on plasticity, consistency, appearance, and other qualities of soap is not consid-

ered. Synthetics, however, are rendered less irritant to the skin by combination with soap. *Seifen-Oele-Fette-Wachse*, Josef Augustin, Feb. 18, 1953, Page 276.

## Vacuum Soap Process

**C**HIEF progress in soap manufacture in recent years has been transforming conventional batch production into a continuous process. In place of treating the soap in separate working steps, new techniques are based on continuous operation with savings in time, labor and power. Further improved processing results where drying and cooling the soap are conducted under vacuum.

Equipment and technique for continuous vacuum soap production have been announced recently by the Italian firm of G. Mazzoni, located in Busto Arsizio, Varese, Italy. The conventional frames, chilling rooms, and dryers are eliminated. According to the company, this process starts with the neat soap and continuously produces an extruded bar of any desired fatty acids content.

The new process, according to Mazzoni, can be adopted in any soap plant. The soap is sprayed into a vacuum chamber and adheres to internal surfaces as a thin film from which it is scraped off continuously and extruded. According to the company, the process offers some notable advantages as follows:

1. Percentage of fatty acid can be determined in advance so that dried, semi-dried, and finished soaps can be produced having a constant fatty acid content.

2. The process operates at low temperatures and in the absence of air minimizing deterioration in the finished product.

3. The vacuum process gives a marked deodorizing action to the soap with a saving in perfume for toilet soaps.

4. The process is wholly mechanical, requires little supervision, and offers opportunity to check process at any time and make corrections in defects of neat soap.

5. Absence of hard particles or

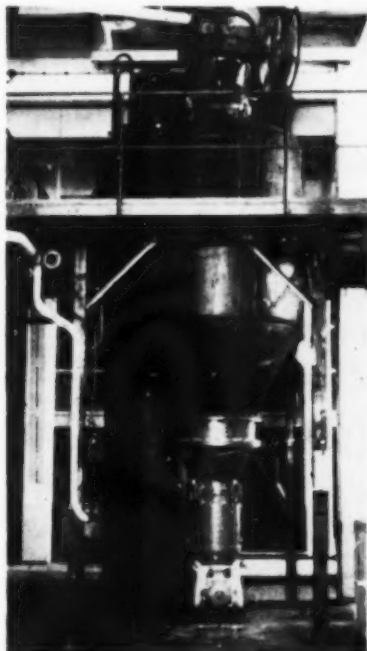
grit, giving better appearing and performing toilet soaps.

6. Improved lathering properties and a more even and smoother wearing down of the soap cake due to improvement in the "beta" phase.

7. Economies in production cost as saponification heat is utilized for removal of moisture from the soap to obtain desired fatty acid content. Saving of steam and power is approximately  $2/3$  in the case of steam and  $1/2$  power in the case of a vacuum unit producing 3,500 lbs. soap per hour when compared with modern hot air drying.

8. The new vacuum occupies floor space of 5x5 meters as compared with 4x24 meters for conventional dryers. Also reduced time of operating cycle of process, and elimination of partly processed stocks permit appreciable inventory reduction.

Mazzoni installation for production of continuous extruded toilet soap bar from whence the soap moves to the finishing line for toilet cakes.



The plant for toilet soap manufacture can also be used to produce laundry soaps, 62 to 64 percent fatty acids, filled types of 50 to 60 percent fatty acids, and even soaps with a fatty acids content of more than 72 percent. The Mazzoni plant, according to the firm, can produce with notable advantages either "fresh" soaps or dry soaps according to the requirements.

### Phosphate Crystals in Soap

Tetrasodium pyrophosphate in crystal form may be used as a rapidly soluble additive for soap or synthetic detergent powders. Phosphates, especially calcined tetrasodium pyrophosphate, have been used as additives for some time, but rarely in proportions equivalent to water hardness. In the case of a powder, be it soap or synthetic, the addition is made in the mixing kettle. The finished powder, especially if it contains oxygen, should have as low a water content as possible.

Laboratory tests have shown that when the finished product is dissolved the soap and the sodium pyrophosphate go into solution simultaneously, and formation of lime soap begins before the pyrophosphate has had time to react fully with the water hardening substances. Thus, the added phosphate achieves only a partial effect because of the slow rate at which the nearly calcined powder dissolves, and because the phosphate particles are coated by soap. If the finished powder contains a lime sensitive synthetic, conditions are similar, though not quite so pronounced.

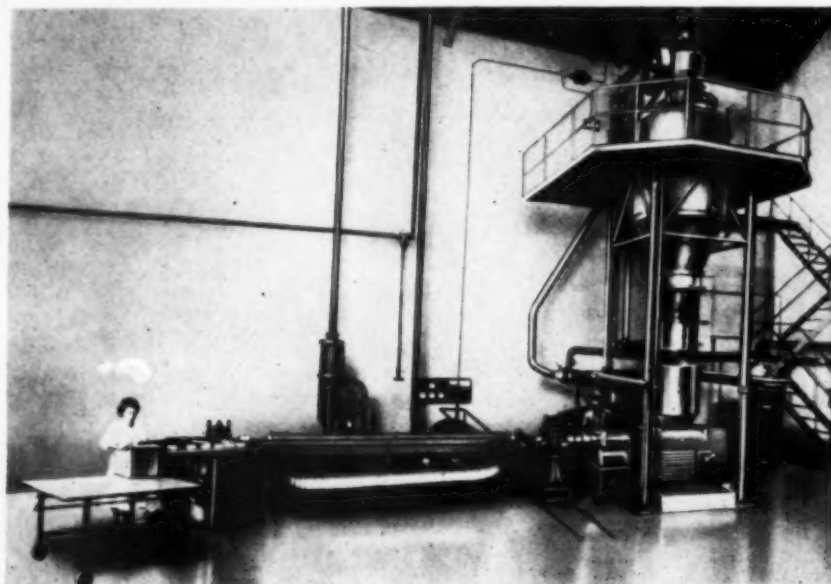
This loss in efficiency can be overcome by the use of a rapidly soluble phosphate and by mixing the phosphate and the sodium perborate with the finished powder, and not with the mass in the mixing kettle.

Crystallized tetrasodium pyrophosphate (patent filed by Giulini G.m.b.H., Ludwigshafen am Rhein) dissolves two to four times as fast as the other anhydrous phosphates. Addition of 10 percent of these crystals to a washing powder achieves approximately the same effect as an equal addition of calcined sodium pyrophosphate, while the  $P_2O_5$  content and, consequently, the prices are lower.

# MAZZONI

## Continuous Soap Plants

*save time, labor, steam, power, plant space*



View of MAZZONI automatic vacuum soap equipment with a capacity of one ton of household soap per hour.

### Advantages of the MAZZONI Process:

- ★ Small plant space; only one operator needed.
- ★ Saves 70% in steam, 50% labor, 40% electric power.
- ★ Operates at low temperature, avoiding deterioration of soap.
- ★ Vacuum process gives better toilet soaps. Deodorizing effect reduces perfume needs. Smoother, grit-free cakes which wash off evenly. Improved lathering. Automatic perfuming device included.
- ★ Laundry soaps, pure or filled, ready for pressing and immediate packing without slabbing, cutting, etc.
- ★ Suitable for adaptation in any soap factory, — a compact, low-cost vacuum process, continuous from neat soap to pressing and wrapping.
- ★ Plants for outputs of half-ton, one ton, or two tons per hour.

*For further detailed information, write to*

**G. MAZZONI, S. p. A.**  
**Busto Arsizio, (Varese) Italy**

Cable address: Cosmazzoni, Busto Arsizio

### ASTM Soap Standards

Standards for Soaps are listed in a book recently published by American Society for Testing Materials, Philadelphia. Covered in the book are bar soap, palm oil bar soap, chip, oil chip, built soap powder, milled toilet, white floating; caustic soda, modified soda, soda ash, liquid toilet; sampling, chemical analysis and particle size, solid soap, foaming properties, pH of aqueous solutions. Blue cloth binding; page size six by nine inches. Two tables of contents; detailed index in each part. Retail price of book, \$10.00; to ASTM members, \$7.50.

### New Owens-Illinois Booklet

A directory of the products made by Owens-Illinois Glass Co., Toledo, O., has recently been published. The directory describes and illustrates representative non-glass products of the company's various operating units. Copies are available on request to Owens-Illinois Glass Co., Toledo, O.

### Introduces Color Alarm

Hallikainen Instruments, Berkeley, Calif., recently introduced "Color Alarm", a differential type of colorimeter providing alarm or visual signal when preset color limit is exceeded. The instrument is a continuous flow color indicator utilizing phototubes and amplifier which actuates the signal device. According to the manufacturer, sensitivity on cottonseed oil is one red Lovibond color with the reference product having Lovibond number of 6; on stearic acid sensitivity was 3/10 red Lovibond number with reference sample of 1 red Lovibond number.

### New Antara Catalog

A new 28-page catalog on detergents, wetting agents, emulsifiers, brighteners, sequestrants, and dyeing assistants has recently been issued by the Antara Chemicals Division of General Dyestuff Corp., New York. The book lists important application suggestions in a wide range of specialties fields. A new and simplified nomenclature system for Antara's entire line of products is also introduced in the catalog. Copies of the catalog may be obtained by writing to Antara Chemi-

cals Division, General Dyestuff Corp., 435 Hudson St., New York.

### New Solid Formaldehyde

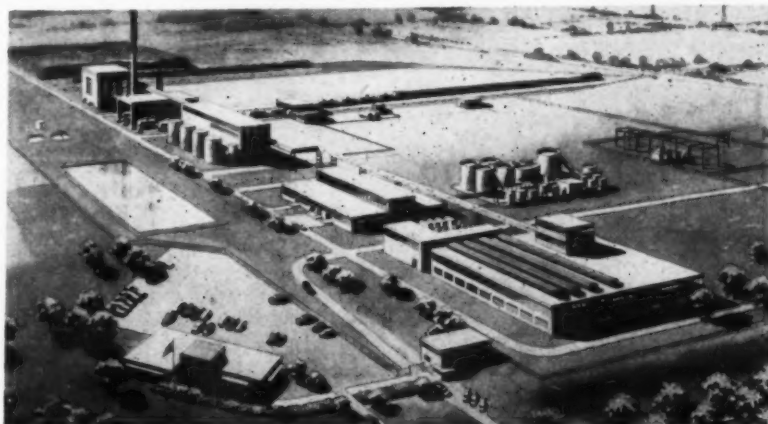
A new solid form of formaldehyde with less than one-tenth of one percent water content was announced recently by Heyden Chemical Corp., New York, and is now being marketed in commercial quantities under the trade name "Superfyde".

The new Heyden product is of interest as a fumigant and fungicide, particularly where slow and controlled evolution of a gaseous formaldehyde is important. The material's very low water content is an advantage in many organic reactions where the properties of formaldehyde are useful but its reaction is inhibited or prevented by the presence of water. Paraformaldehyde, which is somewhat similar in structure, is not adapted to these uses because of its relatively high moisture content.

### New Metallic Soaps Book

"Metallic Soaps as Gelling Agents for Plastigels," by K. Parker and L. Tritsch, has recently been issued by Witco Chemical Co., New York. The relative effectiveness of the various metallic soaps as gelling agents, and full descriptions of the procedures followed as well as the data obtained are given in the text and in the form of graphs. Note is also taken of the stabilizing properties of each soap. Copies are available from Witco Chemical Co., 260 Madison Ave., New York.

Hooker Type S3-A electrolytic cells will be used to convert brine into caustic soda, chlorine, and hydrogen at the new \$12,000,000 plant which Hooker Electrochemical Co. of Niagara Falls, N. Y. is now constructing at Montague, Mich. The plant, which is scheduled for completion by the year's end, is located on a 500-acre site, and has 200 acres set aside as a salt brine field.



### Chlorine Bibliography

A bibliography on the biological activity of various chlorinated compounds has been published recently by the product development department of Solvay Process Division, Allied Chemical & Dye Corp., New York. The collation has been extracted from "Summary Tables of Biological Tests" of the National Research Council. It shows results of tests performed with 1,3-dichlorobenzene, 1,2,3-trichlorobenzene, 1,2,4-trichlorobenzene, 1,2,3,4-tetrachlorobenzene, 1,2,3,5-tetrachlorobenzene, and 1,2,4,5-tetrachlorobenzene for their properties as arachnidicides, insecticides, larvicides, ovicides, insect repellents, and rat and snail control. The publication is available from Solvay on request.

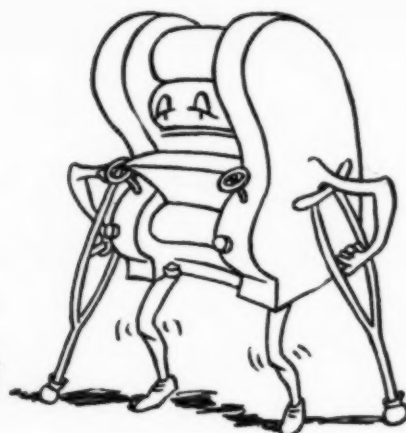
### Two New Monsanto Solvents

Phenylcyclohexane and bicyclohexyl, two newly available high boiling solvents with favorable odor and toxicity characteristics are described in a bulletin recently prepared by the phosphate division of Monsanto Chemical Co., St. Louis. Use of the materials as compatibilizing and penetrating agents is suggested.

### Aqueous Wax Polish

Waxes are saponified with ammonia in the presence of  $\text{NH}_4$  soaps of fatty and (or) resinic acids. The process is continued until all saponifiable parts have reacted. Austrian patent 173,522.

# Is it smart management to wear out production machinery?



The Lehmann 912 SA  
Five Roll Finishing Mill.

When should production machinery be replaced? Should a manufacturer continue to operate obsolete equipment, "come hell or high water"? What happens to the competitive position of a company that adheres to such a policy, while alert competitors meantime are reaping the advantages of technological progress by reducing operating costs with newer models?

These questions have particular significance in the period we are now entering, which promises to be a long-term buyers' market. If you have not yet investigated the possibilities of substantially reducing production costs through the use of the latest models of Lehmann Amalgamators, Plodders and Roughing and Finishing Mills, this is certainly the time to do so.

And remember, Lehmann manufactures a complete roller mill line in a full range of sizes from laboratory equipment to high production models such as the 912 SA illustrated here.

If you wish to improve your position in today's competitive markets — investigate the advantages of these better soap finishing machines in reducing production costs.



## J. M. LEHMANN COMPANY, Inc.

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### New Bleaching Booklet

Efficient bleaching practice is discussed in a recent issue of "Diamond Washroom Digest", recently published by Diamond Alkali Co., Cleveland, O. The booklet is issued quarterly as an aid for managers and superintendents of commercial power, institutional, linen supply and industrial plant laundries. The 12-page bulletin points out the dependence of fabric life upon correct bleaching methods, why bleach is used in both manufacturing and laundering cotton goods, and its effects of degradation upon them. Four factors effecting bleaching efficiency and economy are reviewed, supplemented by three institutional "case histories" on conserving linens through bleaching practice. Allied topics also discussed include how bleach is prepared, bleaching in the rinse, and how to correct for an over-bleached condition. Copies of this issue are available upon request to Diamond Alkali Co., 300 Union Commerce Building, Cleveland, O.

### New D&O Vanilla Brochure

A revised, reprinted edition of the D&O Vanilla Products Brochure has recently been issued by Dodge & Olcott, Inc., New York. Containing 24 pages of formulas and directions for manufacturing and professional use, the new brochure incorporates such additional features as the Dow Propylene Glycol Solubility Charts, and an entire section devoted to Vaniprox products.

### Glycol as Humectant

Carbide and Carbon Chemical Co., New York, recently announced that tests performed by the company's fellowship at Mellon Institute show that Carbowax polyethylene glycol 400 may be successfully used instead of glycerol as the humectant in many cosmetic creams.

### Offers New Emulsifier

Fine Organics, Inc., New York, recently introduced an emulsifier for use in formulation of toilet bowl cleaners containing hydrochloric acid. The emulsifier contains ortho-dichlorobenzene. When mixed with hydro-

chloric acid it gives a stable emulsion containing approximately 23 percent hydrochloric acid by weight.

### Organic Chemicals Catalog

Shell Chemical Corp., New York, recently released a new organic chemicals catalog, generously illustrated, and giving the properties, specifications and applications of the company's solvents, industrial chemicals, resins, and plastics. Copies of the catalog can be secured at any of the Shell Chemical sales offices.

### New ACCL Membership List

Latest membership list of the American Council of Commercial Laboratories, Inc., Washington, D. C., has recently been issued. The A.C.C.L. is an association of 62 independent testing, research, and inspection laboratories, with 50 branches, located in the chief metropolitan centers of the country.

### Cleanser and Polish

A paste containing chalk 50-54, tripoli (limestone) 17-15, bole (soft clay) 5-4, magnesia 2-1, petroleum jelly 18.1-19.2, paraffin 7.2-6.2, and saponifiable fat 0.7-0.6 parts is used for cleaning and polishing windows, silverware, lacquered surfaces, etc. Swiss patent 273,348, 1951, through *Chem. Abstracts*, vol. 47, No. 3, page 1413.

### Coming Meetings

Association of Consulting Chemists and Chemical Engineers, annual meeting, Belmont Plaza Hotel, New York, October 27.

Chemical Specialties Manufacturers Association, midyear meeting, Hotel Drake, Chicago, May 17-19; annual meeting, Hotel Mayflower, Washington, D. C., December 6-8.

Drug, Chemical and Allied Trades section, New York Board of Trade, Astor Hotel, New York, May 26.

National Materials Handling Exposition, Convention Hall, Philadelphia, May 18-22.

National Pest Control Association, 21st Annual Convention, Hotel Nicollet, Minneapolis, October 19, 20, 21, 1953.

Synthetic Organic Chemical Manufacturers Association, joint meeting with MCA, Greenbrier Hotel, White Sulphur Springs, W. Va., June 11-13.

### Detergent Briquettes

New detergent briquettes for use in dishwashing machines are of such shape that the rate of dissolution remains practically constant even though the volume diminishes as the block dissolves away. The briquette has a cylindrical outer surface and a central longitudinal channel which is between one tenth or one quarter of the diameter of the briquette. A detergent solution of solution of substantially uniform concentration is provided by causing the dissolving liquid to pass over the briquette and through the longitudinal channel. British patent 687,075.

### Gum Arabic Bulletin

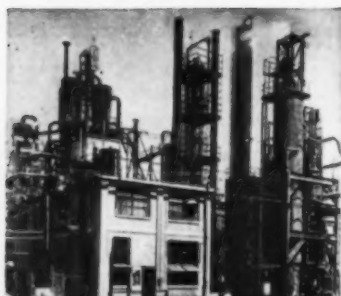
A technical service bulletin, No. G-101, on gum arabic, a water soluble natural gum used in the manufacture of chemical specialties, has recently been published by Morningstar, Nicol, Inc., New York. Preparation of solutions, moisture characteristics and recommended preservatives are described in the two-color, four-page bulletin. Copies may be obtained from the company at 630 W. 51st St., New York.

### Improved Quaternaries

Nitrioltriacetic acid and ethylenediaminetetra-acetic acid are used as chelating agents to prevent inhibition of bactericidal properties of quaternary ammonium compounds. The chelating agents form water-soluble complexes with multivalent metal ions, i.e. Ca, Mg, Ba, Sr, Sn, Cu, Pb, Mn, Zn, Ni, Al, and Fe. Swiss patent 276,557, 1951, through *Chem. Abstracts*, vol. 47, No. 3, page 1341.

### New Pelargonic Booklet

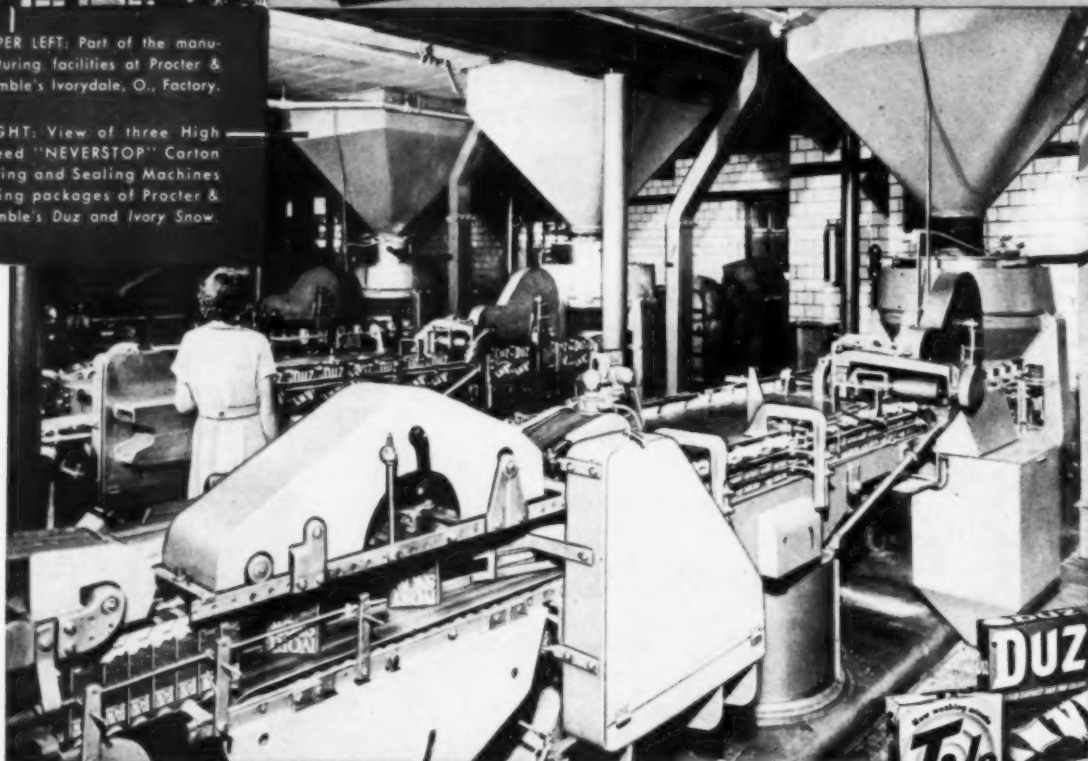
A new booklet on Emery 892-R Pelargonic Acid, an improved grade of pelargonic acid, has recently been published by Emery Industries, Inc., Cincinnati, O. Contained in this booklet are tentative specifications, typical characteristics, typical composition data, applications and shipping data. For a copy of this booklet write to Emery Industries, Inc., Dept. 5 Carew Tower, Cincinnati, O.



# DUZ<sup>\*</sup> IT BETTER

UPPER LEFT: Part of the manufacturing facilities at Procter & Gamble's Ivorydale, O., Factory.

RIGHT: View of three High Speed "NEVERSTOP" Carton Filling and Sealing Machines filling packages of Procter & Gamble's Duz and Ivory Snow.



## "NEVERSTOP"

### CARTON FILLING AND SEALING MACHINES

Soap granules, detergents or food and grocery products are packaged on Stokes and Smith "NEVERSTOP" at high speed, neatly and accurately with a non-sift seal.

The "NEVERSTOP" Machine feeds the cartons from a supply, bottom seals, fills through rotary adjustable filling pockets and top seals at speeds up to 15,000 per hour. Slack filled packages are automatically rejected.

Secure complete detailed information on the "NEVERSTOP."



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SUBSIDIARY OF FOOD MACHINERY AND CHEMICAL CORPORATION

## PRODUCTION *Clinic*

By E. G. Thomssen, Ph.D.

**M**OST of us want to get things done in a hurry and see immediate results. Impatience with a production procedure may lead to difficulties that can be avoided by proceeding more cautiously. We gain more in the long run by taking the time to determine whether the course to be followed in a new manufacturing method or in the introduction of a novel item is constructive from several points of view. As it has been aptly stated: to dwell in the Land of Meanwhile is a sound policy in more ways than one.

Time, as we know from experience, is an important factor in the manufacture of most chemical specialties. All sorts of product defects can turn up and in the most unexpected places in the production and marketing of chemical specialties even when sufficient time is taken to study the possible effects of the factor of ageing. Simple chemical products, such as combinations of powdered ingredients, for example, can go bad at times. Caking is frequently encountered. Clear liquids and emulsions are liable to be more troublesome than powdered products. Liquid preparations sometimes develop unsightly precipitates that are difficult to eliminate. Emulsions may separate or thicken upon occasion. Products of creamy or pasty consistencies occasionally harden and shrink. Other specialties may change in color or become rancid.

Such defects have long been the bugaboo of production men, who must constantly be on guard against unpredictable spoilages of this type.

Consumers are not the least bit tolerant when it comes to product imperfections, and the salesman who hears about these complaints exaggerates such incidents, especially if his commission on the sale is at stake. Since such imperfections may show up at any time, it is essential to find the

causes and overcome the difficulty at its source.

Ageing specialties before packaging them helps in preventing spoil-



DR. THOMSSSEN

age. This should be done in bulk form whenever possible. Samples should be drawn and packaged in finished form for additional observation. It is also good practice to expose such samples to atmospheric and other conditions to which a product is subjected in transit or on the shelf before it reaches the ultimate consumer. Moisture, heat and cold are the main causes for defects that occur with age. Sufficient time should be allowed to study the effects of moisture, heat and cold on any product, especially a new one.

Frequently new products are marketed in a hurry to get the jump on competitors, or to duplicate a fast selling competitive item. Hasty marketing is not confined to small companies. Large firms, even those with extensive research facilities, sometimes hurry a product to market, by-passing their laboratories where the answers to all-around product performance, shelf life, etc. could be determined before the new item is distributed.

A good example of what we have been talking about is provided by the initial marketing of soil conditioners. The early stampede to jump

the gun in the sale of these products has caused many a headache not only because of the claims made for the performance of the products, but also because of improper labeling, patent difficulties and advertising claims. The old adage, "It does not pay to be too original", applies in the case of the hasty promotion or marketing of a new item or even a change in an older one.

Not only is it necessary to investigate the performance of a new product thoroughly, but the claims made on labels and in advertising must be considered carefully. The performance of a product must live up to the claims made for it. Regulatory bodies such as the Federal Trade Commission do not bear down on a new product until sufficient evidence exists that claims made for the product are exaggerated and are untenable. The scope of power of the regulatory authorities is broad and thus such bodies are slow to move. When the maker of a product that has a large distribution and is being promoted by false or questionable claims is cited, the action comes as a big shock. Such actions are very expensive and tend to put the company in a bad light. A case in point, although the product is not a sanitary chemical, was the promotion of antihistamines two years ago as remedies for the common cold. It does not pay to oversell a consumer too quickly on a new product.

Another illustration is chlorophyll, the current favorite miracle substance. Eventually the claims made for it probably will have to be toned down considerably.

While haste in manufacturing a regular line of products or jet propelling new items on the market may give a temporary volume of business with desirable profits, it is more prudent in the long run to make haste slowly. This procedure builds customer confidence and a more lasting business.

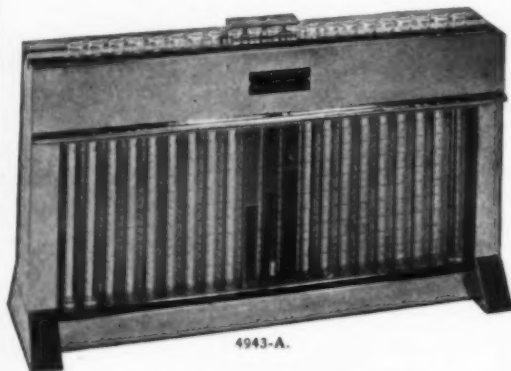
### New Detergent Material

**T**HE popularity of liquid synthetic detergents is still increasing. A drawback to their use has been lack of proper sudsing power. Ninol Laboratories, Inc., Chicago, recently an-



## "Atlab" EMULSION TEST APPARATUS

For the examination and precise comparison of  
prepared emulsion formulations



4943-A.

**EMULSION TEST APPARATUS, "Atlab."** For the examination and precise comparison of prepared emulsion formulations in accordance with a technique developed by Atlas Powder Company. See W. C. Griffin and R. W. Behrens, *Analytical Chemistry*, Vol. 24, No. 6 (June, 1952), p. 1076.

The Emulsion Viewer (patent applied for) permits definitive observation and percent-volume evaluation of 21 samples under standardized conditions. Of Stainless steel, with movable masked light source in a slideway which permits accurate measurement of the extent of creaming, sedimentation or oil separation in test emulsions. Results are read as percent volume directly on the graduated glass scale on the front plate. Illumination is restricted to one tube at a time to eliminate prolonged heating effects. The emulsion tubes are made of carefully selected colorless glass with plane flat bottom.

The accessory Shaking Apparatus—not shown in illustration—is offered for thorough mixing of emulsions under controlled conditions for evaluation in the Viewer. Glass jars containing the samples are laid on horizontal, rubber covered metal rods, without clamping, permitting transfer in minimal time.

**4942-A. Emulsion Test Apparatus, "Atlab,"** as above described, consisting of Emulsion Viewer with 48 Emulsion Tubes 315 X 20 mm and lamp for use on 115 volts; Shaking Apparatus with removable carrier and motor for 115 volts, 60 cycles, a.c.; Automatic Time Switch for control of 30-second shaking cycle, 48 Screw Cap Jars, 4 oz. capacity, and 192 plastic caps for same, ..... **337.00**

**4943-A. Emulsion Viewer, only** with 24 Emulsion Tubes and lamp for 115 volts.....**163.58**

**8919-G. Shaking Apparatus, Reciprocating Type, only,** with removable carrier for twenty 4 oz. jars; with cord and plug for 115 volts, 60 cycles, a.c.....**128.00**

*More detailed information sent upon request.*

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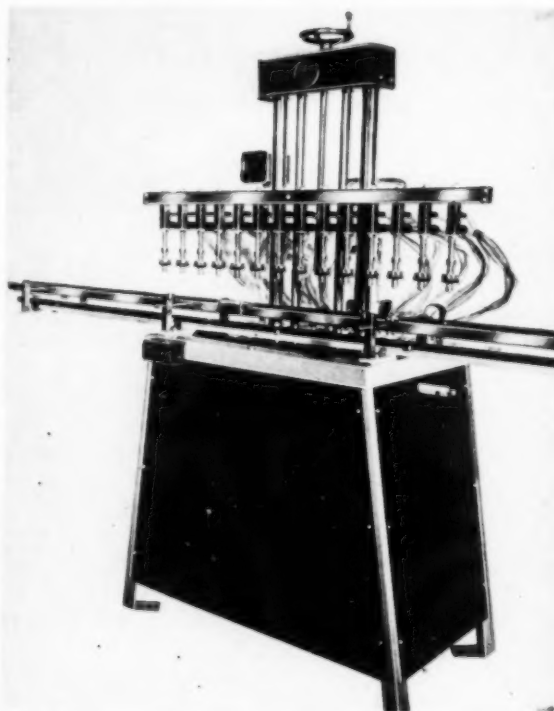
**NEW!!**

# PACKER

**Pneumatically Operated Filler**

# CUTS COSTS

*Automatically!!*



"PV-14"

**Approaches Fully Automatic Machine Production without  
the High Costs and Maintenance!**

1. Push-button controlled electrical timer starts and stops filling cycle automatically! . . . saves labor . . . time . . . money!
2. Reduces operator fatigue!
3. Enables operator to maintain efficient productive pace!

Eliminates "Watchman" over machine during filling cycle . . . utilizes labor for other operations! Can be changed to manual operation in seconds.

For use on Bottles . . . Cans . . . Polyethylene containers in sizes ranging from fractional ounces to five gallons. Models available in vacuum and gravity.

**PACKER MACHINERY CORP.**  
34 IRVING PLACE, NEW YORK 3, N. Y.

SOAP and SANITARY CHEMICALS



nounced a new synthetic detergent material that produces profuse suds. It is particularly adapted for use in liquid dish-washing compounds, for car washing and may be used in liquid hand soaps. Ninol bulletin on "Ninex 21" is available.

#### Ion Exchange Resins

**P**ERMUTIT CO., New York, has been known for a long time in the water conditioning field. For over 40 years the firm has been developing and producing ion exchange materials for all types of water purification. Recently the company has been featuring the use of "Permutit S", a highly basic quaternary amine ion exchange resin, that conditions boiler feed water so it is equivalent to distilled water. This is accomplished at a low cost. Samples of resins and complete information may be had upon request.

#### pH Meter

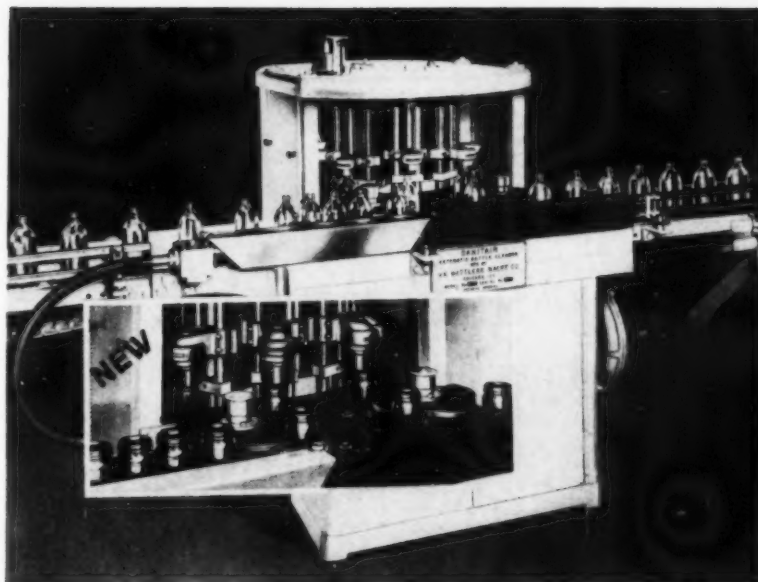
**A**RUGGED, direct and continuous reading pH meter, especially built for plant uses is offered by Cambridge Instrument Co., New York. The important advantages of this instrument recommend it for many industrial uses.

#### Book on Cellulose

**H**ERCULES POWDER CO., Wilmington, Del., recently sent us an advance copy of William S. Haynes new book "Cellulose—The Chemical That Grows". Since Hercules has been among the leaders in cellulose chemistry their accomplishments in this field are included together with many other companies who specialize in this field. The work, written in popular language, should find its way into many scientific libraries.

#### Small Metering Pump

**T**HE Maisch, stainless steel, small size metering pump is handled by Central Scientific Co., Chicago. Where utmost accuracy and dependability in metering small volumes of liquids are desired, the pump fits the requirements. It handles hot, cold, viscous, volatile and non-viscous materials efficiently. Among the items being dispensed are soaps, liquid fats and waxes,



New U. S. Bottlers air cleaner for jars.

oils and glue. The pump is easily disassembled for cleaning and sterilizing. It is resistant to corrosion and there is no contamination of chemicals passing through it. Various types and capacities up to 4.8 gallons per minute are available.

#### Detergent List a Must

**T**HOSE laboratories which do not possess John W. McCutcheon's booklet, "Synthetic Detergents . . . Up to date, II" (1952), which lists over 1,000 synthetic detergents by types, formulas, principal uses, makers, etc., in their libraries are not keeping up-to-date in this field. The work is invaluable to any one interested in detergents.

#### New Packaging Film

The development of packaging from early American days to the present is depicted by Continental Can Co., New York, in a 15-minute color film entitled, "The Story of Packaging."

#### New Automatic Air Cleaner

A new automatic air cleaner designed with large heads for handling jars and other wide mouth containers, has recently been announced by U. S. Bottlers Machinery Co., Chicago. Known as Model "DS-8", it is a high speed automatic air cleaner and its operation is regulated to synchronize

with companion equipment in a production line. This new model has the automatic safety controls and mechanical operation of all late model U. S. Sanitair machines.

#### New Horix Acid Filler

A new filling machine designed for handling acids and corrosive liquids was shown for the first time by Horix Manufacturing Co., Pittsburgh, at the Packaging Exposition, held at the Navy Pier, Chicago, April 20-23. The new filling machine was shown in operation. It was equipped with a newly designed all plastic valve. Other contact parts are suitable for handling such acids as hydrochloric, nitric, hydrofluoric and sulfuric, as well as ammonium hydroxide. Other automatic filling machinery made by Horix was also on display at the exposition.

#### Du Pont 1953 Products List

E.I. du Pont de Nemours & Co., Wilmington, Del., recently issued its products index for 1953-54, containing 276 and XII pages. The catalog consists of four sections classifying products by departments, trade names, alphabetically, and by industrial uses. One section shows locations of offices, plants, and certain stock points. Classification of du Pont products by their uses in major consuming industries is an innovation with this issue.

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**Paper Board and Corrugated Paper Products**

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**EXTRA DISPLAY VALUE**



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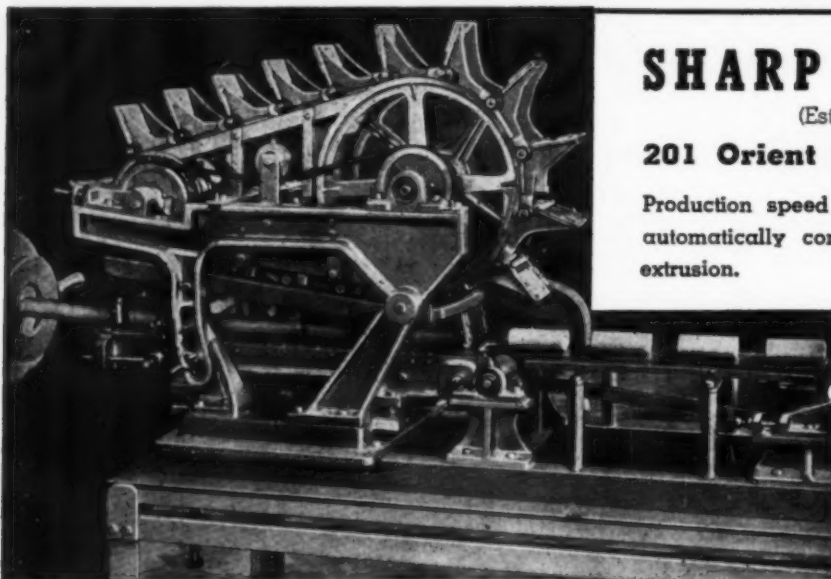


Founded  
1918



**LIBERTY CORRUGATED CONTAINER CORP.**

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**SHARP BROTHERS**

(Established 1914)

**201 Orient St., Bayonne, N. J.**

Production speed of this continuous cutter is automatically controlled by the rate of the extrusion.

All cuts are clean and accurate.

Eliminates all scrap.

Easily adjusted to cut any size bar up to 5 lbs.

Will operate efficiently with any plastic material.

*Adjustable — Continuous*

**SOAP CUTTERS\***

*Operated by Extruded Bar*

**Send for  
descriptive  
literature.**

\* Patent Pending

# Products and PROCESSES

## Urea-Ammonia Toothpaste

The active agent of a dental paste contains urea and dibasic ammonium phosphate, furnishing ammonia, a substantial grit free abrasive, which does not impart alkalinity to the liquid vehicle. The substantially neutral vehicle wherein the agent is in solution includes a stabilizer to check crystallization of the agent with any drop in temperature. British patent 682973, Stafford-Miller Ltd., Hatfield, Herts.

## Sheet Metal Cleaner

A cleaning compound for zinc and galvanized sheet metal contains at least one degreasing agent (sulfonated fatty alcohol), an organic acid (citric) and a tin salt (stannous chloride). A suggested mixture consists of 60 percent pumice, talcum or kaolin, 20 percent tin chloride, 17 percent citric acid, and three percent fatty alcohol sulfonate. Swiss patent 273,347, 1951.

## New Germicide for Soap

A new German antiseptic, suitable for incorporation in germicidal toilet, medicinal and shaving soaps, is described in *Seifen-Oele-Fette-Wachse*, March 18, 1953, page 138. The new agent, tradenamed "Raluben", is claimed to be highly active not only against staphylococci, but almost equally so against coli and typhoid bacteria as well as dermatophytes (fungi). Based on halogenated phenols, the new product is said to be non-irritating to the skin and to possess deodorant qualities.

The phenol co-efficient of "Raluben" in a standard commercial toilet soap is reported to be: 9 for staphylococcus aureus, 9.5 to 10 for bacterium coli, 11 to 12 for bacterium typhi H, seven for bacterium paratyphi B and bacterium breslaviense.

The product may be used in dark toilet soaps at the rate of two to three percent. For addition to light toilet soap an allied product named "Raluben P" is recommended in pro-

portions of three to four percent. These germicidal agents are added to toilet soaps by dry milling into the chips, to curd soap by intensively working it into the hot soap batch. The new additives are claimed to compare favorably in price with similar previously developed products.

## Anionic Based Shampoos

Compounds of the sulfuric ester type are among the most commonly employed of the anionic synthetic detergents in the cosmetic industry. Their most important application is in shampoos. The formulation of a liquid type being based on an alkali-neutralized lauryl sulphate, thickened and opacified with carboxy methyl cellulose, soaps, magnesium stearate, etc. Cream shampoos are usually formulated from sodium fatty alcohol sulfates. Consistency of the final product can be adjusted by incorporation of soaps, cellulose derivatives or alginates. Powder type shampoos contain from 15 to 45 percent detergent plus builders such as borax, phosphates, sodium sulphate, etc. Total spray drying is recommended for these products for homogeneity, ease of solubility, and increased packing value. From a paper read by A. Taylor before the Society of Cosmetic Chemists of Great Britain, Dec. 5, 1952.

## Detergents from Palm Oil

Sulfonated or other type detergents, for use alone or in mixture with other detergent substances, are made by a new process: coconut, palm, and similar oils are reduced to alcohols. These are then fractionated to definite products which are sulfonated. French patent 874,464.

## Silicones as Antioxidants

Aromatic polyorganosiloxanes show ability to suppress oxidation in the presence of prooxidants such as soaps, according to recently published report No. 4010 of the Naval Research Laboratory, Washington, entitled "Polyorganosilanes, Organosil-

anes, and Orthosilicate Esters as Antioxidants". Polymethylphenylsiloxanes and phenylcyclopolsiloxanes have proved effective as antioxidants from 100° to 150° C. in grease gelled by sodium, lithium, calcium and aluminum, the inhibitory effect apparently increasing as oxidation progresses.

## New Sewage Defoamers

Chemicals said to eliminate foam, caused by domestic use of synthetic detergents, from effluent before it is discharged to the rivers have been announced recently by Leda Chemicals Ltd., London, England. The products are currently undergoing tests for permanence of the defoaming effect and possible toxicity. Little information concerning the chemical nature of these defoaming agents is available, but they are said to be cation-active compounds capable of neutralizing anionic detergents. Leda has filed a patent for the products in the United Kingdom and in the United States. *Manufacturing Chem.*, February 1953, p. 47.

## New Grease Remover

Fine Organics, Inc., New York recently announced the development of an ortho acid emulsifier to be used for the preparation of toilet bowl cleaners, containing hydrochloric acid. One gallon of this emulsifier, which contains some orthodichlorobenzene, when mixed with nine gallons of 18° Be or 27.92 per cent hydrochloric acid technical, will give a finished bowl cleaner containing approximately 23 per cent hydrochloric acid by weight. This mixture is a stable emulsion. No separation is noted after one hour. The weight per gallon of ortho acid emulsifier is 10.4 pounds. The finished product has hygienic odor and bactericidal properties.

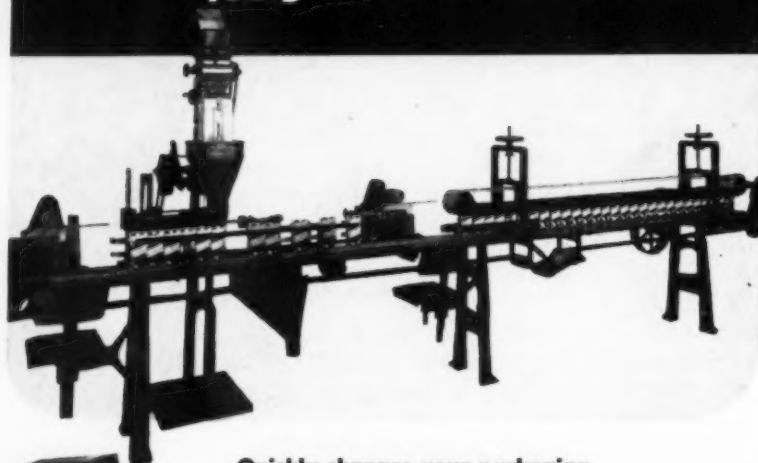
## Stain Removing Powder

To make a stain removing powder, finely screened diatomaceous earth is heated and impregnated with a grease solubilizing substance such as a solvent and dried. German patent 825,731, through *Oléagineux*, January, 1953, page 55.



# Quick-Change artist

**VERSATILITY** is a big  
feature of your **TRIANGLE**  
Weigher and Sealer



## Quickly changes your packaging costs, too — substantially lower

Here's the Triangle Model SH Net Weigher and SA Sealer that handles such a wide variety of filling jobs so efficiently and so economically.

Its versatility means you can fill all types of dry soap products, insecticides, cleansers, household chemicals, fertilizers, and the like. You can fill into a wide variety of packages and a wide range of sizes — with quick changeover.

## Guaranteed Accuracy

This machine features *guaranteed* accuracy on weights . . . and speedy filling and sealing of containers. Users report cost savings of *several thousand dollars per year*. They say the equipment quickly pays for itself.

*Yes, sir. This is a quick change artist you'll applaud. Better take a look at it soon.*

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## Unilever in Malaya

A new Unilever factory was officially opened in December, 1952, at Kuala Lumpur. Its products include soap and edible oils and fats. According to the firm, its capacity can meet the needs of the Federation of Malaya, Singapore, North Borneo and Sarawak. It is hoped to sell 500 to 600 short tons of glycerine annually to the United States as a by-product, and American tallow and rosin will be imported as raw materials.

## Riddiford Bros.

(From Page 51)

also has its own private "Challenger" brand for soaps, waxes, floor seals, gym finishes, etc. This enables them to broaden their offerings, widen the price range and improve service to customers.

Speaking of the Riddiford employee insurance plan, previously referred to, President Doyle declared that some such plan should be made an important part of any business organization and especially those whose activities are mainly in the selling field.

An insurance plan, if applied generally throughout the sanitary supply distribution field might also be effective, he said, in eliminating the labor turnover problem with which the industry is plagued. The National Sanitary Supply Association, he commented, has given much thought to the matter of incentives to reduce turnover. He could not recall that at any of the many convention discussions of this subject, any suggestion had ever been advanced for establishment of group insurance plans such as Riddiford Bros. has provided for its employees.

"Every day we are approached by salesmen with new products. These we never take on until they have been thoroughly field tested in actual use under our own observation. When we do add a new line, it is not because it offers possibilities for large and quick profits only but rather, because it answers one question affirmatively."

This question, he said, is "Will it fill a genuine need and do a good job for our customers?"

SOAP and SANITARY CHEMICALS



# NEW Patents

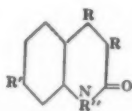
The information below is furnished by patent law offices of

LANCASTER, ALLWINE & ROMMEL

402 Bowen Building  
Washington 5, D. C.

The data listed below is only a brief review of recently issued pertinent patents obtained by various U. S. Patent Office registered attorneys for manufacturers and/or inventors. Complete copies may be obtained direct from Lancaster, Allwine & Rommel by sending 50c for each copy desired. \$1.00 for Canada. They will be pleased to give you free preliminary patent advice.

**No. 2,616,855. Detergent Composition,** patented by Charles E. Wheelock, Cincinnati, Ohio, assignor to The Procter and Gamble Company, Ivorydale, Ohio, a corporation of Ohio. A solid form detergent composition of alkaline nature is covered, having an enhanced whiteness in sunlight, comprising essentially an alkaline detergent selected from the group consisting of (a) water soluble alkali metal salts of higher fatty acids, and (b) non-soap anionic synthetic organic detergents; and, in a proportion of from about 0.0005 per cent by weight to about 0.25 per cent by weight, carbostyryl derivative having the structural formula



in which R is a member of the group consisting of hydrogen, alkyl, and aralkyl, said member containing no more than 15 carbon atoms R' is a radical of the group consisting of hydroxy, amino, mono- and di-alkyl-amino, mono- and dialkylolamino, and heterocyclic amino, said R' group containing not over 6 carbon atoms, and R'' is a member of the group consisting of hydrogen and methyl.

**No. 2,631,962. Insecticidal Composition Comprising a Glycol and an Insecticidal Phosphate,** patented by Joseph B. Moore, Edina, Minn., assignor to McLaughlin Gormley King Company, Minneapolis, Minn., a corporation of Minnesota. A water miscible spray insecticidal composition is covered comprising an alkylene glycol containing from 2 to 6 carbon atoms and an insecticidal phosphate material selected from the group consisting of

tetraethylpyrophosphate, and diethyl-p-nitrophenyl thiophosphate.

**No. 2,627,489. Insect Repellents,** patented by Nathan L. Drake, College Heights, Md., and Sidney Melamed, Philadelphia, Pa., assignors to the United States of America as represented by the Secretary of the Army. A process of rendering a fabric insect repellent is described comprising impregnating said fabric with 1,3-cyclohexanediol monopropanate.

**No. 2,627,500. Distillation of Fatty Acids, Tall Oil, and the Like,** patented by Ralph H. Potts, La Grange, and Roy N. Olson, Chicago, Ill., assignors to Armour and Company, Chicago, Ill., a corporation of Illinois. In a process for treating fatty acids and tall oil, the patent describes the steps of subjecting the material to be distilled to a plurality of separate distillation operations, condensing vapors from a plurality of said distillation operations, withdrawing a portion of the condensate, passing steam in a plurality of streams past said zones and in open communication with the condensing zone thereof, and passing each of said steam streams into preceding distillation zones.

**No. 2,629,158. Printing and Molding Press for Soap Cakes,** patented by Pietro Molla, Mesero, Italy, assignor to S. A. F. F. A. Societa Anonima Fabbriche Fiammiferi Affini, Milano, Italy, a corporation of Italy. Application December 4, 1950, Serial No. 198,923. In Italy November 25, 1949. A machine for pressing and molding soap cakes, is described comprising a die-press portion having a substantially horizontal work-table surface, a horizontal belt conveyor extending along said surface for supplying thereto the cake blanks to be pressed, a feed plunger having an inactive position and being reciprocable from said position across said conveyor and toward said surface for diverting the blanks from said conveyor onto said surface, stop means engageable with said plunger to arrest it in said inactive position, a movable interceptor member disposed above said conveyor in the path of the blanks, control means connecting said member with said stop means for controlling said stop means in response to movement of said member to release said plunger in dependence upon a blank abutting against said member, a feeding device disposed on said worktable surface and having two guide parts extending parallel to the stroke direction of said plunger and being spaced from each other, at least one of said two plates being movable toward and away from the

other plate to periodically hold between said two guide plates the soap blanks diverted from said conveyor, and said two plates being periodically movable up and down as well as forward and backward to incrementally advance and deposit the blanks on said surface, and drive means connected with said die-press portion for imparting movements to said two plates in a fixed phase relation to the pressing operation.

**No. 2,628,943. Method of Washing Glass Bottles and Composition Therefor,** patented by Martin L. Hassel, St. Louis, Mo., assignor to Allied Chemical & Dye Corporation, New York, N. Y., a corporation of New York. The patent covers the process of inhibiting attack of glass surfaces during washing by the action of aqueous alkali solutions substantially free of phosphates and containing caustic alkali as the principal solute, which comprises adding to said solutions an inhibiting amount of a nitrosation-sulfitation product comprising salts of a mixture of organic acids having carbon contents within the range 10 to 30 carbon atoms, said mixture including sulfonated ketones, sulfonated amines, sulfonated alkylidene sulfamates, sulfonated sulfamates and bisulfite addition products of sulfonated alkylidene sulfamates, and being derived from an unsaturated organic compound having at least one non-aromatic



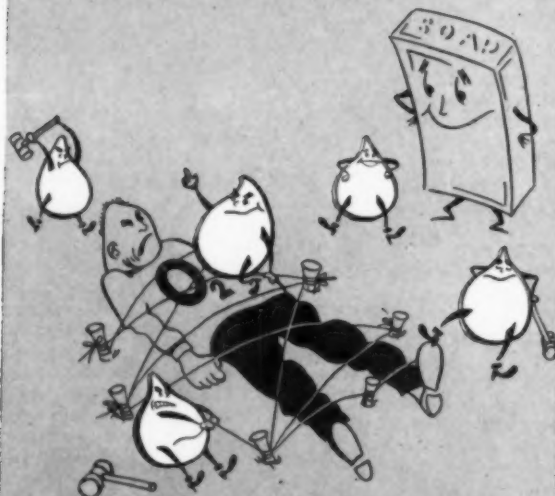
linkage and a carbon content within the range 10 to 30 carbon atoms, by a process involving reaction of a nitrosating agent with a non-aromatic



linkage of said unsaturated organic compound and reaction of the resulting nitrosation product with a sulfite, and subjecting said glass surfaces to contact with the resulting solutions.

**No. 2,629,696. Essentially Non-Aqueous Acid Emulsion Cleaning Composition,** patented by Sidney R. Dodd, West Caldwell, N. J., and Edward J. Ainsley, Merrick, N. Y., assignors to Oakite Products, Inc., New York, N. Y. The patent covers a water dispersible stable acidic emulsion in the form of a gel comprising phosphoric acid, a water insoluble organic solvent emulsified with a non-ionic emulsifying agent, a water soluble organic acid which is normally solid at room temperature in an amount effective to improve rust removal by the composition and a quantity of a water soluble polyhydroxy organic compound free of acid radicals sufficient to prevent the water soluble organic acid from crystallizing out of the emulsion, said water soluble organic acid being a solution which is at least semi-liquid, said emulsion being essentially water free.

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.03% dry Versene or 0.1% Versene (34% solution) added to soap and soap products will make them *definitely* better. Versene inhibits oxidation, rancidity, chalking and color-deepening. It inactivates the contaminating trace metal impurities usually present in raw processing materials. Its powerful chelating action prevents these contaminants from spoiling your process or product by chemically changing their character and rendering them harmless.

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Exceptionally stable at high temperatures and throughout the pH range, the complexing (chelating) power of the Versenes is guaranteed in either sample or carload lots. Versene is made only under processes originated, developed and patented by F. C. Bersworth. Available in liquid or powdered form, Versene can make your soap product or cleaning compound better. Investigate now. Write Dept. C for technical data and sample. Chemical Counsel available.

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(brand of hexachlorophene)

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non-irritating  
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*Hexachlorophene is a development of Sindar Research Laboratories*

SOAP and SANITARY CHEMICALS

## SOAP PLANT *Observer*

By John W. McCutcheon

**O**N and off now for several months past we have been discussing continuous soap processes and one would think that any day now we would run out of material. But soap chemistry never seems to stand still and recently we came across another method the details of which, as far as the writer is aware, have never been published before.

The new process achieves the continuous cooling of laundry type soaps, either filled or unfilled, in a novel type heat exchanger which forces the soap through a very narrow slot between two water cooled surfaces. The equipment for the new process is produced by Meccaniche Moderne, Busto Arsizio, Italy. It differs from the mechanical heat exchanger of the Votator type in that it has no moving parts.

Advantages claimed for the new process include: reduced floor space by doing away with soap frames; uniform chilling which prevents a striate condition resulting from different rates of chilling, and frequently encountered with cooling presses; less



labor required for handling; elimination of the use of a cutting table or slabber, as well as scrap and the need for a remelter. Remelting is a nuisance with silicated soaps because the soap tends to separate in the remelter.

The thin film of soap in contact with a large cooling area is chilled so effectively that cold water alone is sufficient for normal operation. The soap comes from the machine (see accompanying photograph for complete assembly from crutcher to press) in the form of a non-aerated plodded bar

of the exact dimensions required for the press. It is then cut and dried by conventional means and passes to a press.

This idea is not entirely new. Several years ago the writer described a process observed at the plant of the former Werk company in Cincinnati. A water chilled plodder was sufficient to cool a low fatty acid laundry soap bar. The new Italian process is a great refinement over that employed by Werk.

The producer of the equipment for the new process, like everyone else who has a new idea, had a hard time selling its first plant. In fact the going was so tough that the firm came up with an idea which seems to be worth a word or two by itself.

The inventor set up a small but complete pilot plant on a light truck. The plant consisted of a crutcher, cooling machine, plodder, and foot press. Prospective customers supplied the soap and fillers and watched the bar emerge.

The new Italian process might have a limited market in America where laundry soap is continuing to diminish in volume as more powders are used. A few bars made on the pilot plant scale are available from the writer.

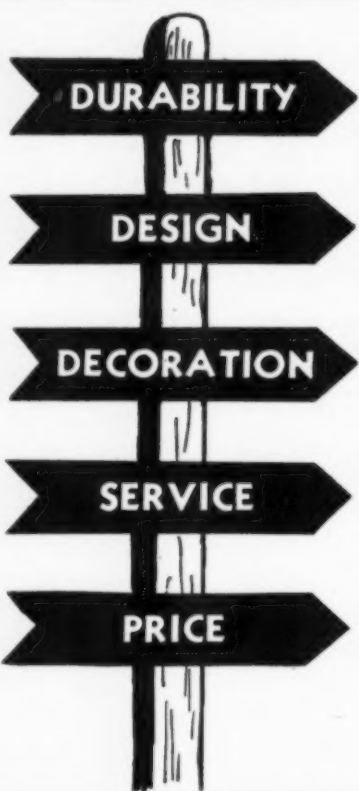
\* \* \*

Brand names represent a tre-

New process for continuous cooling of laundry type soaps.







Eastern's superior workmanship guarantees strong, durable containers that will take your product safely to market.

Eastern's experts can be of major assistance in designing packages that win sales success.

Eastern is noted for top-quality lithography on every shipment.

No costly interruptions with Eastern's service—shipments arrive when and where you specify.

Eastern's advantages available at competitive prices because of our modern plant and long experience.

## All Signs Point to EASTERN for Distinctive PACKAGING

Start on the road to a distinctive package for your waxes, cleaners, polishes and other specialties by calling in Eastern. Plain or lithographed — a package by Eastern guarantees satisfaction for both you and the consumer.

Further details available without obligation.

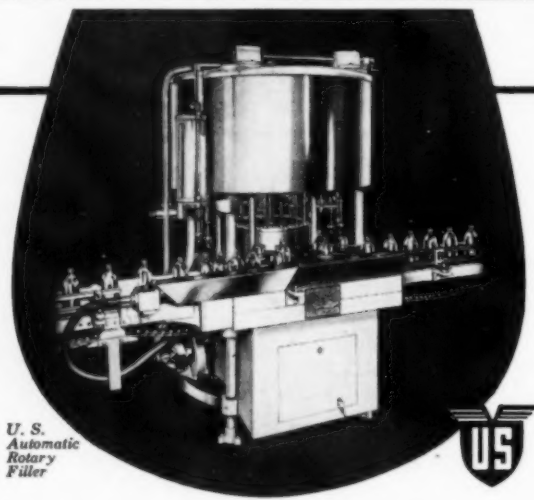


### EASTERN CAN CO., INC.

31 Keap St., Brooklyn 11, N. Y.

ULster 5-0100

Is Filling  
Different  
in Your  
Plant?



U. S.  
Automatic  
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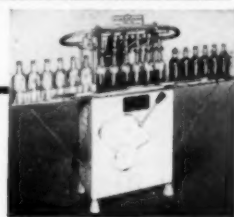
Specific filling requirements usually present problems which standard machines cannot serve adequately . . . only custom-built equipment can be considered. To this end, U. S. engineers have developed six basic fully automatic models, each with a wide range of adaptations. This gives your packaging line the specific filling performance of custom-built equipment at a cost competitive to standard machines. That is why you see the U. S. nameplate on the machines in the big-name plants. Write for machine recommendations. This will not obligate you.

### U. S. BOTTLERS MACHINERY COMPANY

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MONTREAL • TORONTO • VANCOUVER • WINNIPEG • EXPORT OFFICE: TOLEDO, OHIO



U. S. Model B-49, Straightline Vacuum Filler. Adjustable for all types of containers.

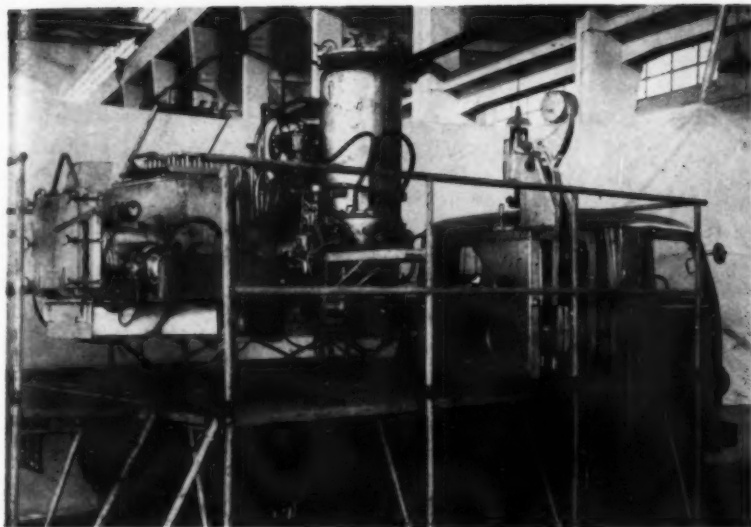


U. S. Model B-2 Semi-Automatic Vacuum Filler. Fast, portable. Filling is continuous.



U. S. Siphon Filler, Improved model. Stainless steel tubes, glass lined tank. Dependable.





Pilot plant of Meccaniche Moderne on truck

mendous investment to most companies and when such a brand name is lifted out of character and applied to a physically different type material, it represents quite a momentous step. The trade name "Lux" is now applied to a liquid dishwashing detergent put up in an attractive 12-ounce can and is being test marketed in the Philadelphia and Baltimore areas. This is not the first time a trade name has been passed along to a new product. "Palmolive" shave cream picked up the name from the bar soap, and "Ivory Snow" owed its name to the bar soap name. It is the first time as far as the writer is aware, however, that a synthetic detergent product has borrowed its name from a soap cousin and is a fact which should not pass unnoticed. There was a time, not too many years ago, when trade names were not considered very permanent, a life of about 15 years for a toilet bar was considered good. Advertising methods and changing media have changed all that.

\* \* \*

**L**OVIBOND color glasses have been used for many years in the soap industry for controlling oil and fat processing. These have gradually given way to spectrophotometric methods. Not long ago, a new method of color reading by means of polaroid glasses manufactured by Polaroid Co. of Cambridge, Mass., was noted. An

examination of a set of standard glasses by this method indicated good possibilities. However, outside opinion from several sources pointed out that the development of a proper machine for holding and calibrating the glasses would be an expensive and long drawn out affair, also that color reading by visual means was of the order of plus or minus 10 percent which did not compare in accuracy with instrumental photometry methods. Actually, about one person out of five is color blind to some degree. All in all, it appears that the development of polaroid color glasses, as far as the soap industry is concerned, came about 15 years too late.

— • —

#### Shows Level Check

General Electric Co., Schenectady, N. Y., showed its new X-ray machine that automatically checks the level of liquids in cans on filling lines and is applicable, also, for some free flowing solids in cartons at the recent canners convention in Chicago. Known as a "high speed level checker," the unit operates at a rate of 900 cans per minute, which is far faster than any filling line now runs. Heart of the machine is a tiny crystal of cadmium sulfide, which acts on signal from an 80,000-volt X-ray tube.

This apparatus is placed at the end of the inspection line conveyor, or just before the containers are loaded into shipping cartons. When a

can or carton that is not full enough comes along, the crystal receives a jolt from the X-ray tube. This starts an electrical circuit which is relayed to an automatic air-blast unit that blows the faulty container off the line.

The device was originally developed for inspection of military hand grenades to insure full content of time-delay powder in the fuse. First public showing for civilian commercial uses was made during the canners' convention in Chicago in February.

In addition to use for filling liquid containers, the unit may be adapted for waxes, oils and chemicals, the company announced. Also to such free flowing materials as soap powders, tooth powders and insecticides.

— • —

#### New T.G.A. Standards

The Toilet Goods Association, New York recently issued new standards covering diethylene glycol monostearate, non-self-emulsifying, and propylene glycol monostearate, non-self-emulsifying.

— • —

#### Aluminum Sulfate Booklet

A booklet describing aluminum sulfate and its numerous applications in industry, recently was issued by American Cyanamid Co., New York. Illustrated with charts and graphs, the booklet outlines the history, manufacture, properties and uses of aluminum sulfate. Sections of the booklet include: alum in the treatment of municipal and industrial water supplies; and alum in the treatment of sewage and industrial wastes. Copies of the booklet are available upon request to the industrial chemicals division, American Cyanamid Co., 30 Rockefeller Plaza, New York.

— • —

#### Canco Litho Color Control

A lithographic color control system, assuring conformity to customer standards through the use of high-precision optical instruments, recently was announced by American Can Co., New York. The company uses units called "reflectometers" for litho color control work. Labels, designated by manufacturers, are sent to Canco laboratories for spectrophotome-

ter and reflectometer readings. Maximum and minimum reflectometer readings are established from the laboratory tests and a set of acceptable tolerances recorded. In this way production runs of a particular label at any of the company's 34 units can be checked on the reflectometer using the laboratory tolerance readings as a guide. An advantage of the litho color control program is that permanent records of approved colors are made. It assures exact colors originally specified, and removes the human element of failure, according to the company.

#### New Chlordane Folder

Chlordane for control of cattle lice and ticks is the subject of a folder recently issued by Velsicol Corp., Chicago. The folder gives information on when and how to apply chlordane, certain precautions and its advantages. Copies of the folder are available from Velsicol Corp., 330 E. Grand St., Chicago.

#### General Aniline Bulletin

A selected series of high pressure acetylene derivatives now under development by General Aniline & Film Corp., New York has recently been described in its new Bulletin M-104. The structures, physical form, availability, and suggested uses of these materials are briefly tabulated. The varied chemical compounds have found use as chemical intermediates and cosmetic components. Copies of Bulletin M-104 are available upon request to General Aniline & Film Corp., 435 Hudson St., New York.

#### Pamphlet on Cleanliness

A new home management pamphlet, "112 Easy Ways to Chase Dirt," has recently been published by the cleanliness bureau of the Association of American Soap and Glycerine Producers, Inc., New York. Covering the washing of everything from anti-macassars to household zoos, the booklet not only gives practical hints and "how-to-do" sketches on scrubbing the house and contents, but also tells some unusual uses for soap. Copies are available from AASGP, Inc., 295 Madison Ave., New York 17.

#### Brochure on Plastic Bags

A new brochure on polyethylene bags and liners was recently released by Plastic Packaging Co., Chicago. The illustrated brochure covers functional polyethylene bags, polyethylene liners, packaging with paper support, packaging with metal, wood or glass support, and closures for plastic packaging polyethylene bags and liners. Included in the four-page brochure are typical applications of wet or dry chemicals and materials, and lists specifications required when ordering. The brochure may be obtained on request to Plastic Packaging Co., 730 North Franklin St., Chicago.

#### Mildew Prevention Data

Chemicals for protecting paints and painted surfaces against mildew and mold are reviewed in a bulletin published recently by the organic chemicals division of Monsanto Chemical Co., St. Louis. Methods are suggested for utilizing the company's "Santobrite" (sodium pentachlorophenate), "Santophen 20" (pentachlorophenol) and "Milmer 1" (copper 8-quinolinolate) to preserve water base paints, latex and other emulsion paints, as well as oil paints, both natural and synthetic. The bulletin includes a table summarizing the data by type of wall surface to be protected, either before or after a finish coat is applied, and for exterior and interior use.

#### Offers Diamond Alkali Book

A new bulletin entitled "Organic Chemicals for Agriculture and Industry", has recently been issued by the Organic Chemicals Division of Diamond Alkali Co., Cleveland, O. Divided into three main divisions, insecticides, herbicides and industrial chemicals, the book gives complete descriptions of the company's products. Under insecticides, it discusses DDT, BHC, lindane, and "Miticide K-101" and presents solubility tables for determining solvents for use with technical DDT, BHC and lindane.

The section on herbicides gives a description of a number of toxicants, including 2,4-D (butyl ester technical and isopropyl ester), 2,4,5-T (butyl and isopropyl esters) 2,4-D, (butoxy

ethoxy propanol, 2,4-dichlorophenoxyacetate) and 2,4,5-T (butoxy ethoxy propanol, 2,4,5-trichlorophenoxyacetate). General descriptions are given on each product, with charts of physical and chemical properties, applications, packing specifications and cautions to be observed in handling and using the materials. Industrial chemicals are handled in a similar manner, with hexachlorobenzene technical and trichlorobenzene technical being listed. Copies of the bulletin are available from Diamond Alkali Co., Organic Chemicals Division, 80 Lister Ave., Newark, N. J.

## Effect of Soap

(From Page 48)

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#### Acknowledgment

The investigation was supported by a grant from Procter & Gamble Company, Cincinnati, Ohio. The authors wish to thank Dr. D. J. Kooyman of Procter & Gamble Company for carrying out the statistical analysis of the data.

#### Cosmetic Assn. Moves

The California Cosmetic Association recently announced the acquisition of new offices at 5864 Hollywood Blvd., Los Angeles.

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If you are a manufacturer of disinfectants, insecticides, floor waxes, aerosol products, soap and detergent specialties, automotive chemicals, and kindred chemical specialties, this is an invitation to look into the advantages of membership in the Chemical Specialties Manufacturers Association.

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\*Professor W. N. Bruce, associate entomologist of the Illinois State Natural History Survey at Urbana and nationally known for his research on cattle insecticidal sprays, reported on this, and other synergists, at the annual conference of the North Central Branch of the Entomological Society of America. This report is now in press in the proceedings of the branch.

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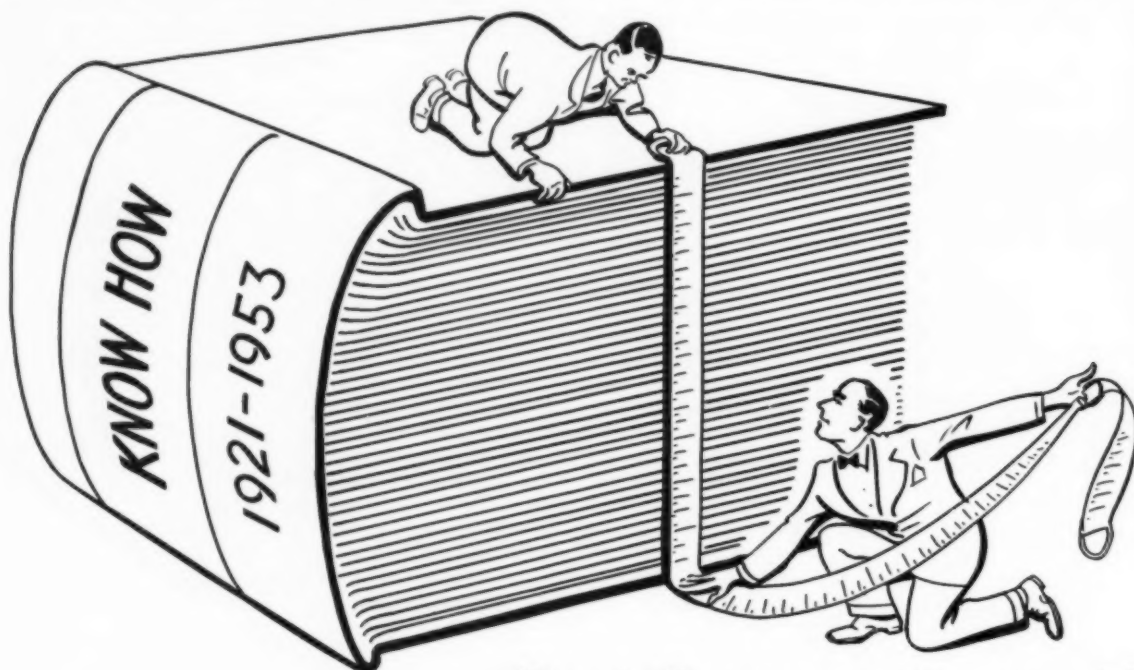
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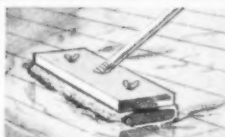
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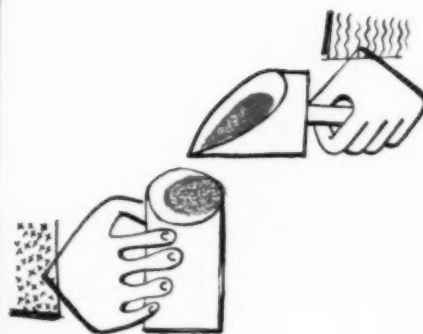
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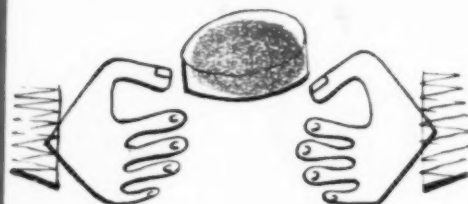


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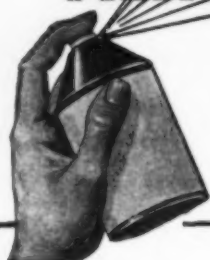
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# More Highlights from the Du Pont AEROSOL MARKET SURVEY



**Majority of Retailers Believe Aerosol Products Are Good Repeat Sellers**

Of the 2,233 retail outlets interviewed in 60 cities throughout the U. S. during Du Pont's extensive study last summer of the market for pressure-packed aerosol products, 82 per cent reported that they stock one or more aerosols.

These stores represent six major distributing classifications: department stores, drug stores, grocery stores, hardware stores, variety or 5 & 10¢ stores, and automobile service stations. In almost every instance, the majority of these 82 per cent stocking aerosols reported that they consider aerosols good repeat-sales items. Study the chart below. The outlook for repeat purchases (with few exceptions) is good or fair for both household and personal types of aerosol products. The low figure indicated for sunburn and similar preparations may be due to the newness of such products.

## HOUSEHOLD PRODUCTS

	INSECTICIDES FOR FLYING INSECTS	INSECTICIDES FOR CRAWLING INSECTS	ROOM DEODORIZERS	WAX POLISHES	PLASTIC SPRAYS	PAINTS & LACQUERS
GOOD	58	52	46	41	34	26
FAIR	27	24	28	28	18	28
POOR	8	9	12	12	15	23
DON'T KNOW	11	15	15	21	35	25

## % OF DEALERS STOCKING THE PRODUCT

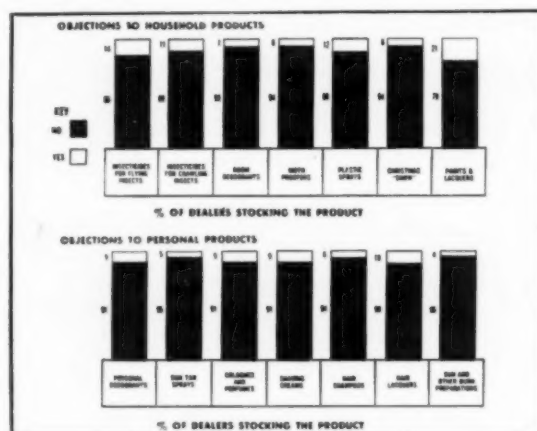
## PERSONAL PRODUCTS

	PERSONAL DEODORIZERS	TOE TALK SPRAYS	SKIN CREAMS AND LOTIONS	SHAVING CREAMS	HAIR SHAMPOOS	HAIR LACQUERS	TOE AND OTHER SKIN PREPARATIONS
GOOD	41	28	25	28	23	15	28
FAIR	27	18	22	27	25	18	18
POOR	8	12	22	17	15	9	28
DON'T KNOW	25	38	31	28	34	21	44

## % OF DEALERS STOCKING THE PRODUCT

Still another interesting highlight is seen in the percentage of dealers reporting customer objections (if any) to the aerosol method of dispensing various products. The following chart shows an exceptionally high proportion of satisfied users of aerosols.

**AN INVITATION:** Be sure to visit Du Pont suite, C.S.M.A. Convention—Drake Hotel, Chicago, May 17, 18, 19, 1953



A complete, 20-page digest of this Du Pont aerosol survey entitled "The Aerosol Market" will be sent upon request. It tabulates important findings and is helpful in evaluating this steadily growing market. Write for it today.

**MOST AEROSOLS CONTAIN "FREON" PROPELLENTS.** There is good reason why. "Freon" propellents are safe . . . nonflammable, nonexplosive, virtually nontoxic. They are made in strict accordance with exacting laboratory-controlled methods of manufacture, and their inherent qualities of purity and uniformity assure satisfactory performance in aerosols of every type. If you would like technical assistance in formulating a product with a "Freon" propellant suitable to meet your specific needs, address: E. I. du Pont de Nemours & Co. (Inc.), "Kinetic" Chemicals Division, Wilmington 98, Delaware.



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**ESTAWAX SPECIFICATIONS**

	<b>20</b>	<b>25</b>
Color, N P A	3 max.	3 max.
Melting Point, °F (ASTM E28-42T)	210 - 220	210 - 220
Penetration (100/5 @ 77° F)	2 max.	2 max.
Viscosity (cps @ 500° F)	450 - 550	200 - 300

*ESTAWAX is available for prompt shipment, and can be supplied in 8 slab cartons (80 lbs.) or in powdered form (16 mesh, max.) in fibre drums (approx. 100 lbs.).*

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## HEPTACHLOR

### CONTROLS THESE INSECTS

Alfalfa Weevils, Ants, Argentine Ants, Cotton Boll Weevils, Cabbage Maggots, Chinch Bugs, Corn Borers (European), Corn Rootworms, Cotton Thrips, Cowpea Curculio, Crickets, Cucumber Beetles, Cutworms, European Chafer, Eye Gnats, Fleas, Flea Beetles, Garden Webworms, Grasshoppers, Japanese Beetles, Leaf Miners, Lygus Bugs, Mormon Crickets, Mosquitoes, Narcissus Bulb Flies, Onion Maggots, Onion Thrips, Plum Curculio, Rapid Plant Bugs, Screwworms, Seed Corn Maggots, Serpentine Leaf Miners, Spittle Bugs, Sugar Beet Root Maggots, Sweet Clover Weevils, Tarnished Plant Bugs, Tobacco Flea Beetles, Tomato Fruitworms, Tuber Flea Beetles, Turnip Maggots, Western Harvester Ants, White Grubs (June Beetles), Wireworms . . . *and many others.*

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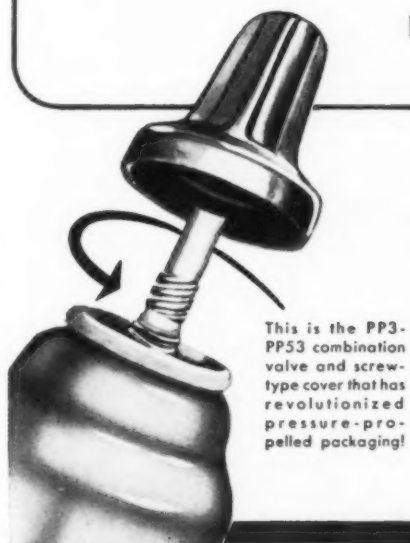
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# A.

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"The Keystone Combination" of second baseman and shortstop is what makes a baseball team "strong down the middle." In your aerosol formulations, it's the effectiveness in quick knockdown and kill of the pyrethrin (or allethrin) and the synergist that makes your product "strong down the middle." Of course there are many chemicals with which pyrethrin and allethrin can be teamed up, but the growing experience of the industry points more and more to the fact that the most effective synergist for pyrethrin and allethrin is piperonyl butoxide.

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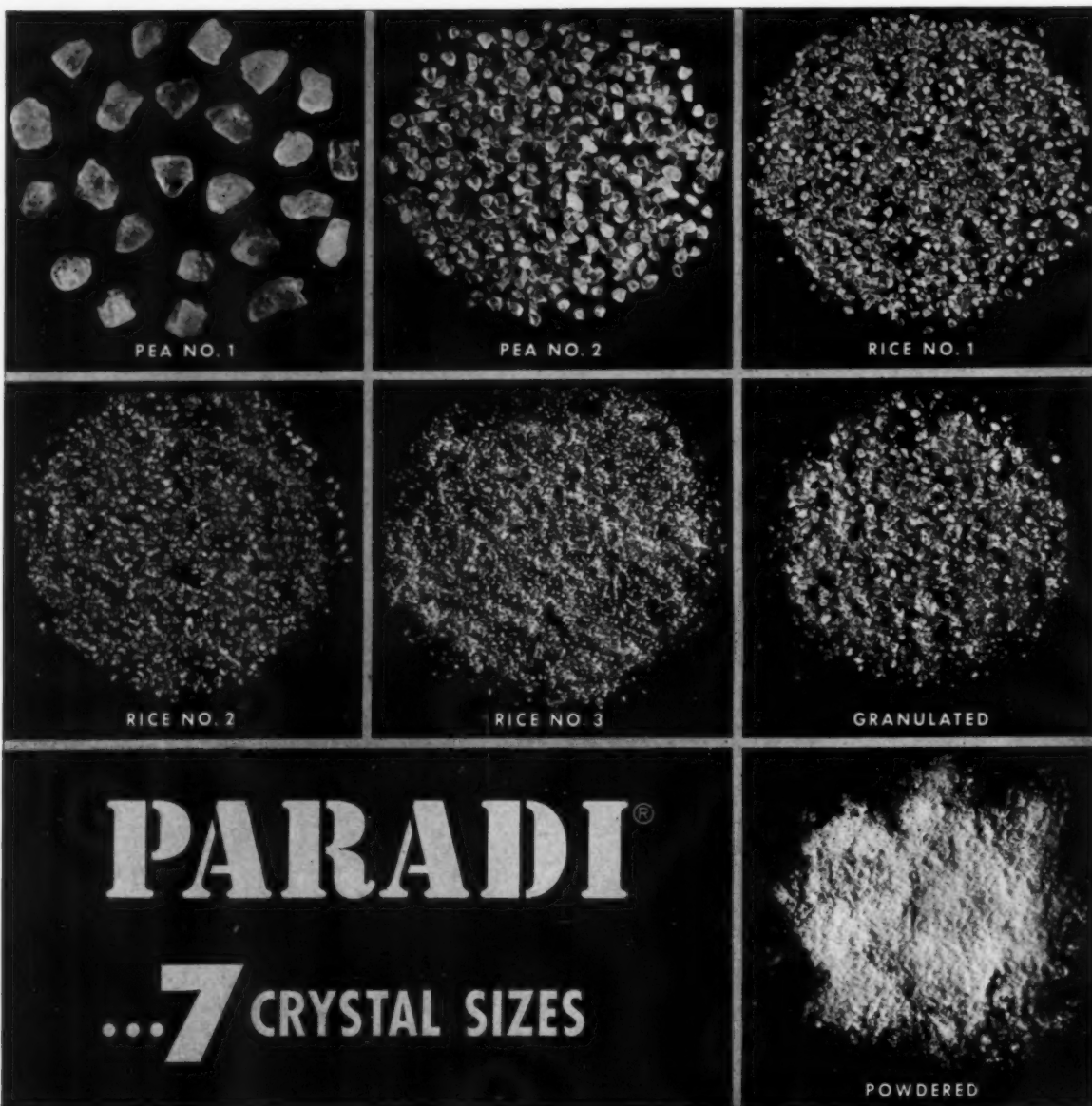
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# C.S.M.A. Meeting in Chicago

**T**OPICS being discussed at the 39th mid-year meeting of the Chemical Specialties Manufacturers Assn. being held at the Hotel Drake, Chicago, May 18 and 19, range from the new insecticide "Strobane" to the effect of waxing vinyl flooring and aerosol cosmetics. These and other subjects are being covered in papers and four panel discussions at general sessions and individual or joint meetings of the six divisions of which the C.S.M.A. is composed.

Association business includes the nomination and election of administrative committees of the six divisions for 1954 and the election of a nominating committee for officers and directors of the association in 1954.

Scheduled to address the group luncheon on May 18 is Dr. Gustav Egloff, director of research for Universal Oil Products Co., Des Plaines, Ill., who speaks on "Newer Products from Petroleum". He is to be introduced by William B. Plummer of Indoil Chemical Co., Chicago. The Tuesday, May 19th, luncheon speaker is Guy E. Reid, executive vice-president of Harris Trust and Savings Bank, Chicago. George L. Simmonds of U. S. Sanitary Specialties Corp., Chicago, introduces Mr. Reed.

The two-day meeting, which is preceded on Sunday, May 17, by meetings of the board of governors and various committees of C.S.M.A., features

**Marketing, manufacturing and legislative problems discussed in papers and panels at 39th mid-year meeting at Hotel Drake**

division meetings Monday morning and afternoon, May 18, and Tuesday afternoon, May 19. A general session is scheduled for Tuesday morning, May 19. Three divisions: Aerosol; Disinfectant and Sanitizers, and Soap, Detergents and Sanitary Chemicals hold simultaneous sessions Monday morning, May 18. That afternoon, motion pictures are to be shown from 2:15 to 4:30 p.m. Simultaneous meetings of the Automotive; Insecticide, and Waxes and Floor Finishes Divisions are set for Monday afternoon, May 18. A social event, company open houses, begins that day at five p.m. and runs through until 9:00 p.m.

The reports of the president, secretary and treasurer are to be presented at the general session on Tuesday morning, May 19. That afternoon the following divisions meet: Aerosol, Disinfectant and Sanitizers; Insecticide; and Soap, Detergents and Sanitary Chemicals. A joint meeting of the Waxes and Floor Finishes and Automotive Divisions is also being held Tuesday afternoon, May 19. The

cocktail party and banquet concludes the day's events.

Program highlights include a symposium on paint in aerosol packages; another on the toxicity of the ingredients of household insecticides; a panel on organic additives to detergent mixtures; and a group discussion of registration and re-registration of disinfectant and sanitizer labels. A feature of the Automotive Division program is a discussion of "What the Automotive Jobber Looks for from the Automotive Specialty Manufacturer" by Frank Beis, sales manager of Chicago Auto Parts Co.

Industry problems, primarily Federal, State and municipal legislation, will be covered by John D. Conner, C.S.M.A. Washington counsel, and by William S. Jessop of U. S. Sanitary Specialties Corp., Chicago, chairman of the association's legislative committee.

An industry discussion of the proposed trade practice rules for the floor wax and floor polish industry, and the recent hearing before the

C. L. WEIRICH, President



MELVIN FULD, 1st Vice-Pres.



PETER C. REILLY, JR., Treasurer





**T. CARTER PARKINSON**  
Vice President



**WILL FLATOW, JR.**  
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**H. W. HAMILTON**  
Secretary

Federal Trade Commission, is set for the Waxes and Floor Finishes Division session, Monday afternoon, May 18.

Bayard S. Johnson of Franklin Research Co., Philadelphia, will act as moderator. At the same session a discussion

of specifications for floor wax for the General Services Administration's Federal Supply Service will be held.

## Program for 39th Mid-year Meeting Chemical Specialties Manufacturers Association, Hotel Drake, Chicago, Monday and Tuesday, May 18 & 19.

### Monday Morning, May 18

- 8:30 a.m. Registration (French Room Foyer)  
9:30 a.m. **Aerosol Division (Walton Room)**  
Edmond G. Young, presiding  
Address of division chairman, Dr. Edmond G. Young  
Kinetic Chemicals Division, E. I. du Pont de Nemours & Co., Wilmington, Del.  
10:00 a.m. Symposium: "Pressurized Paints." Moderator: J. J. Gregory, Chase Products Co., Maywood, Ill.  
(a) "Formulation of Aerosol Lacquers," Fred S. Palmer, Jackson Laboratory, E. I. du Pont de Nemours & Co., Wilmington, Del.  
(b) "Progress in Development of Aerosol Paints," George A. Nichols, technical director, paint and varnish factories, Sears Roebuck & Co., Chicago, and  
(c) "The Consumer and Aerosol Paints," Louis F. Body, president, Body Brothers, Inc., Cleveland  
11:15 a.m. 1952 Aerosol Product Survey  
12:00 a.m. Report of nominating committee, George Barr  
Election of division administrative committee for 1954  
**Disinfectant and Sanitizers Division (French Room)**  
Russell D. Puhle, presiding  
9:30 a.m. Address of division chairman, Russell G. Puhle, Tyker Products Division, Borden Co., Brooklyn, N. Y.  
10:00 a.m. Report of nominating committee, John F. Gain  
Election of division administrative committee for 1954  
10:45 a.m. "The Control of Fish-Bone Disease in Humans Through Sanitation," Dr. Vladimir Divorkovitz, Diversey Corp., Chicago  
11:15 a.m. "Mode of Action of Germicides—Part II," Dr. S. Boyk, Ottawa Chemical Co., Toledo  
11:45 a.m. "Evaluation of 2,2'-Thiobis (4,6-dichlorophenol) (Actamer) in Various Soaps," Richard R. Egan, Gerson-Stewart Co., Cleveland

### Soap, Detergents and Sanitary Chemical Products Division (Ball Room)

Daniel H. Terry, presiding

- 9:30 a.m. Address of division chairman, Daniel H. Terry, Bon Ami Co., New York  
9:50 a.m. Report of nominating committee, James M. Cloney  
Election of division administrative committee for 1954  
10:00 a.m. Panel Discussion: Organic Additives to Detergent Mixtures  
Moderator: E. J. Black, Warwick Chemical Co., Long Island City, N. Y.  
(a) "Sequestering Agents," H. W. Zussman, Alrore Chemical Co., Providence, R. I.  
(b) "C M C," Dr. H. R. Suter, Wyandotte Chemicals Corp., Wyandotte, Mich.  
(c) "Foam Stabilizers and Boosters," Dr. H. L. Sanders, Ninol Laboratories, Chicago  
(d) "Brightening Agents," Dr. E. I. Stearns, Calco Division, American Cyanamid Co., Bound Brook, N. J.  
(e) "Perfumes, Neutralizers," Victor DiGiacomo, Givaudan-Delawanna, Inc., New York

### Monday Afternoon, May 18

- 12:25 p.m. Luncheon (Gold Coast Room)  
Welcoming address by president, Clarence L. Weirich, C. E. Dolge Co., Westport, Conn.  
Election of nominating committee for 1954 officers and board members  
Introduction of luncheon speakers by William B. Plummer, Indoil Chemical Co., Chicago  
Dr. Gustav Egloff, director of research, Universal Oil Products Co., Des Plaines, Ill.  
"Newer Products from Petroleum"  
2:15 p.m. to  
4:30 p.m. Motion Pictures—Room M-18  
3:30 p.m. Discussion of New Floor Wax Specification with J. B. Snider, Chief, Chemicals, Drugs and Agricultural Products, Federal Supply Service, General Service Administration, Washington, D. C.  
4:00 p.m. "Relation of Laboratory Tests to Practical Field Re-

sults," J. J. Crawford, General Services Administration, New York

5:00 p.m. to 9:00 p.m. Company "open houses"

## Tuesday Morning, May 19

### General Session (Ball Room)

Melvin Fuld, presiding

- 10:00 a.m. Report of the secretary, H. W. Hamilton, Chemical Specialties Manufacturers Association, New York
- 10:15 a.m. Address of the president, Clarence L. Weirich, C. B. Dolge Co., Westport, Conn.
- 10:30 a.m. Report of the treasurer, P. C. Reilly, Reilly Tar & Chemical Corp., Indianapolis
- 10:40 a.m. "Safety Sam—The Consumers' Man," E. M. Hughes, R. M. Hollingshead Corp., Camden, N. J.
- 11:00 a.m. Introduction of speaker, Henry J. Brownstein, Hysan Products Co., Chicago  
Professor Albert I. Kegan, Chicago; Subject: "Fun, Fame and Fortune Under the 1953 Patent Law"
- 11:30 a.m. "Proper Labeling of Shipments by Railroad," Dr. W. G. McKenna, Association of American Railroads, Bureau of Explosives, South Amboy, N. J.
- 11:50 a.m. Trends in Legislation of Interest to the C.S.M.A., John D. Conner, general counsel, C.S.M.A., Washington, D. C.
- 12:10 p.m. Report of the legislative committee, chairman, W. S. Jessop, U. S. Sanitary Specialties Corp., Chicago

## Tuesday Afternoon, May 19

### (Golden Coast Room)

Clarence L. Weirich, presiding

- 12:25 p.m. Luncheon  
Introduction of speaker, George L. Simmonds, U. S. Sanitary Specialties Corp., Chicago  
Guy E. Reed, Executive Vice-President, Harris Trust and Savings Bank, Chicago

### Automotive Division (French Room)

J. M. Kimmel, presiding

- 2:15 p.m. Address of division chairman, J. M. Kimmel, Aeropak, Inc., Chicago
- 2:30 p.m. Report of nominating committee, A. J. Coulter  
Election of division administrative committee for 1954
- 2:45 p.m. "What the Automotive Jobber Looks for from the Automotive Specialty Manufacturer," Frank Beis, sales manager, Chicago Auto Parts Co., Chicago
- 3:15 p.m. "What the CSMA Can Offer the Automotive Specialty Manufacturer," H. W. Hamilton, secretary, Chemical Specialties Manufacturers Association, New York
- 3:30 p.m. Report of automotive division marketing committee, Chairman, R. O. Cowin, Standard Oil Co., Cleveland
- 3:50 p.m. Report of automotive division scientific committee, Chairman, N. J. Gothard, Sinclair Refining Co., Harvey, Ill.

### Insecticide Division (Walton Room)

James A. Green, presiding

- 2:15 p.m. Address of division chairman, James A. Green, Standard Oil Company (Indiana), Chicago
- 2:40 p.m. Report of nominating committee, Dr. Alfred Weed  
Election of division administrative committee for 1954
- 2:50 p.m. "Strobane—A Promising New Insecticide," D. L. Kent, Goodrich Chemical Co., Cleveland. Frank O. Hazard, Wilmington College, Wilmington, O., Friar M. Thompson, Jr., Athens, Ga.
- 3:20 p.m. "Application of Radioactive Tracers to Insecticide Research," Dr. Paul A. Dahm, Kansas State College, Manhattan, Kans.
- 3:50 p.m. "Fogging Test Method for Evaluation of Insecticides Against Roaches," H. R. Rich and R. L. Brett, West Disinfecting Co., Long Island City, N. Y.
- 4:20 p.m. Results of Insecticide Industry Survey, Dr. George W. Fiero, Esso Standard Oil Co., New York

### Waxes and Floor Finishes Division (Ball Room)

Donald M. King, presiding

- 2:15 p.m. Address of division chairman, Donald M. King, Masure-Young Co., Boston
- 2:30 p.m. Report of the nominating committee, Gerard R. De Napoli  
Election of division administrative committee for 1954
- 2:40 p.m. "Effect of Floor Wax on Vinyl Flooring," C. S. Kimball, Foster D. Snell, Inc., New York
- 3:00 p.m. Discussion of the Proposed Federal Trade Commission Trade Practice Rules for the Floor Wax and Floor

Polish Industry, Bayard A. Johnson, Franklin Research Co., Philadelphia

### Aerosol Division (Ball Room)

W. E. Graham, presiding

- 2:15 p.m. "Psychological Properties of Deodorizing Materials," Dr. Dean Foster, director of laboratories, U. S. Testing Laboratories, Hoboken, N. J.
- 2:40 p.m. "The Beauty Editor Looks at Pressure Propelled Cosmetics," Miss Helen Wells, woman's editor feature department, **Chicago Sun-Times**, Chicago
- 3:30 p.m. "Packaging for the Cosmetic Industry—a Guide for the Aerosol Manufacturer," Gilbert Snider, Gilbert Snider Co., New York
- 4:00 p.m. Report of Aerosol scientific committee, chairman, E. J. McKernan, Seaquist Manufacturing Corp., Cary, Ill.

### Disinfectant & Sanitizers Division (Room M-18)

R. S. Shumard, presiding

- 2:15 p.m. Panel discussion: Registration and Re-Registration of Disinfectant and Sanitizer Labels  
(a) "Requirements of Federal Re-Registration of Disinfectant and Sanitizer Labels," L. S. Stuart, U. S. Department of Agriculture, Washington, D. C.  
(b) "The Manufacturer's Viewpoint of Federal and State Registration of Labels," W. A. Hadfield, Pennsylvania Salt Manufacturing Co., Philadelphia  
(c) "Present and Proposed Regulations Regarding Registration of Disinfectant and Sanitizer Labels," John D. Conner, general counsel, CSMA, Washington, D. C.
- 4:00 p.m. Preliminary report of special committee on quaternaries, J. B. Dienna, Rohm & Haas Co., Philadelphia

### Insecticide Division (French Room)

George W. Fiero, presiding

- 2:15 p.m. "The Place of Insecticides in Farm Sanitation," Dr. R. J. Dicke, University of Wisconsin, Madison, Wis.
- 2:45 p.m. Symposium: "Toxicity of Ingredients of Household Insecticides"  
Moderator: Carlos Kampmeier, Rohm & Haas Co., Philadelphia, Pa.  
(a) "Hazards in Use," Dr. Wayland J. Hayes, U. S. Public Health Service, Savannah, Ga.  
(b) "Labelling," Justus C. Ward, Production & Marketing Division, U. S. Department of Agriculture, Washington, D. C.  
(c) "Strobane," Dr. H. A. Shelanski, Industrial Toxicological Laboratories, Philadelphia  
(d) "Piperonyl Butoxide," Dr. W. E. Dove, U. S. Industrial Chemicals, Baltimore  
Report of insecticide chemical analyses committee; chairman, Mark L. Hill, Gulf Oil Corp., Philadelphia.

### Soap, Detergents and Sanitary Chemicals Division (Parlor C)

W. S. Jessop, presiding

- 2:15 p.m. "The Influence of Accumulated Soil on the Bacterial Population of Milking Machines," W. L. Mailman, Don Muentener, Frank Peabody. Presented by Dr. W. L. Mailman, professor of bacteriology and public health, Michigan State College, East Lansing, Mich.
- 3:00 p.m. Report of soap, detergents and sanitary chemicals scientific committee; chairman, J. C. Harris, Monsanto Chemical Co., Dayton
- 3:15 p.m. "Evaluation of Sea-Water Laundry Detergents by Standard Soiled Cloths," Rubin Bernstein and Harry Sosson, Industrial Test Laboratory, Philadelphia Navy Yard, Philadelphia. Presented by Harry Sosson
- 3:45 p.m. "Foam Stabilization by Alkylolamides," Herbert L. Sanders and E. A. Knaggs, Ninol Laboratories, Chicago. Presented by E. A. Knaggs.
- 4:15 p.m. "Spray Drying of Detergents," A. E. Sharphouse, Ultra Chemical Works, Inc., Paterson, N. J.

### Joint Session (Walton Room)

#### Waxes and Floor Finishes and Automotive Divisions

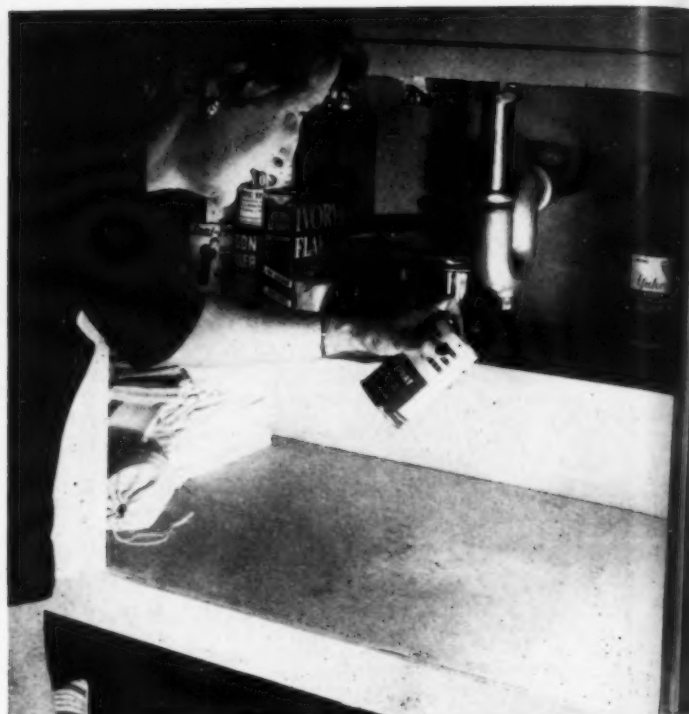
C. S. Kimball, presiding

- 2:15 p.m. "Discussion of U V Absorbers," C. M. Knowles, Antara Chemicals Division, General Dyestuff Corp., New York, N. Y.
- 2:45 p.m. "Methods Used in Determining Acid Number of Shellac," Dr. D. E. Whyte, S. C. Johnson & Son, Inc., Racine, Wis.
- 3:20 p.m. "Quality Control," A. R. Jackson, Allen B. Wrislev Co., Chicago
- 4:20 p.m. "Today's Resin-Wax Picture," C. T. O'Conner
- 6:30 p.m. Cocktail Party (French Room)
- 7:30 p.m. Banquet and Entertainment (Gold Coast Room)





# AEROSOLS



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**W**ITHIN the last decade there has been an extraordinary growth in the consumption of shellac by the water emulsion wax industry. Because of this sudden increase in a relatively new use, there are bound to be some new consumers whose information on shellac may be somewhat vague. It is the purpose of the writer to attempt to clarify some of the more salient points on the subject and perhaps to rectify some unfortunate misconceptions which seem to have gained a certain amount of credence throughout the trade. Let us first consider the amazing origin of shellac.

At some time in the ages following the Great Flood, when mankind was young and insects already millions of years old, one particular species of insect found the climate of the Himalayan Slopes most suitable for its needs. While its early existence is lost in the mists of antiquity, we know that the early Hindus took notice of it as it appears in ancient records which antedate the Nativity by over 2,000 years. The word "Lac" is still part of a living language today and its primary meaning has remained unchanged throughout the centuries. It means one hundred thousand. Since the Hindus have established the fact that the Lac insect is numerous, I shall merely mention the fact that it takes about a million and a half of them to produce a pound of Lac and that an annual production of fifty-five million pounds is usually expected.

#### **How Shellac Occurs**

**H**OW does this occur? Under today's modern methods of cultivation Brood Lac, consisting of bundles of Lac ready to swarm, is hung on selected trees. In due course the insects emerge and select the more succulent twigs and commence operations. They bore a small hole in the twig and take the sap of the tree through their bodies. The female soon exudes Lac to such an extent that she loses her mobility. Then she is fertilized by the male and soon produces eggs which she continues to cover with this exudation. When this task is completed, her life work is over and she dies.

# SHELLAC . . .

**An ancient material finds growing use in modern floor preparations**

**By Henry E. Blanchford**  
Mac-Lac Co.

Other generations emerge from the eggs and the life cycle continues. Ultimately a crust is built up on the twigs (see illustration). That is what a keen observer would see if he studied these minute insects, but the most fantastic occurrence is in that which he could not see. Most of the Lac which reaches primary markets originates on five different types of trees, and although the species of tree may vary, the molecular weight of the shellac remains between 900 and 1,000. The chemical structure is of such uniformity that many a resin manufacturer might well envy the consistency of chemical uniformity. You might well consider the Lac insect a synthetic resin manufacturer. The sap of

the tree prior to entering her body consists of terpenes and rosin acids 90% of which are of an aromatic nature, yet after being processed in her body only 10% of aromatic structures remain. She has successfully converted the rest into lactones, lactides, inter esters and ethers of various poly hydroxy acids, 90% of which are *aliphatic* compounds. She has also produced a small amount of a most interesting wax. This is certainly a synthesis!

The natives harvest the Lac and sell it to the local factories where it is washed, cleansed, dried and winnowed, (see illustration). In the primitive trading areas they still use methods which are prevalent in other

Drying Seedlac protected from the direct rays of the sun.

U. S. Dept. of Agriculture photo





Growth of Lac on trees.

U. S. Dept. of Agriculture photo

parts of the world where illiteracy is high. The sellers all squat in a circle and the buyers pass from one to another with a cloth over one hand. As the buyer holds the hand of each seller in turn all bid and asked quotations are given by hand signals under the cloth. From this description you might get the idea that shellac is an under-

handed business, but it is from here on in that the wisdom and ethics of the American businessman are exerted. Knowing of the unusual chemical uniformity of raw Lac, many American manufacturers have done their best to preserve that uniformity through accurately controlled refining methods. In addition to this, steps have

been taken to assure that no deterioration or adulteration could occur between the Up-country factory and the shipping point. Qualified chemists were brought to America from the Far East at the expense of the United States Shellac Importers Association and trained in the plant laboratories of the manufacturers. Using methods the soundness of which has been established through their adoption by the A.S.T.M. and the International Standard Inst., these chemists test each shipment in their laboratories in Calcutta and since a shipper cannot draw on his letter of credit without an analysis certificate, any possibility of inferior or adulterated shellac is eliminated. This also protects the shipper from any unscrupulous competitors who might offer inferior goods. Many of our friends importing waxes would, no doubt, wish that they could also operate under such an air-tight system. Unfortunately for them the chemistry of waxes is much more complex than that of shellac, and such a simple solution at the moment is not practical.

To sum up this phase of the discussion:

A. Shellac is a material of

Winnowing Seedlac and sorting.

U. S. Dept. of Agriculture photo





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CHEMISTS AND ENGINEERS  
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Report On **Wax** February 5, 1953  
To **Warwick Wax Company, Inc.,**  
Subsidiary of Sun Chemical Corporation  
1010 - 44th Avenue, Long Island City, New York  
Our Case No. **44899** Sample No. **ISI** Date Rec'd **February 5, 1953**

How Received **By Mail**

Instructions **Test for manganese content in accordance**  
with specifications of  
**Rubber Tile Manufacturers Association.**

Sample **ISI** Marked

**Results:**

Sample marked:	Manganese %
Cardis Wax #1	Less than .0001
Cardis Wax #314	.0004
Cardis Wax #319	Less than .0001
Cardis Wax #320	.0003

**COMMENT:**

The manganese content of the above waxes is well below the maximum allowable manganese content of .0005% specified by the Rubber Tile Manufacturers Association.

Respectfully submitted,  
SKINNER & SHERMAN, INC.

*Robert A. Sullivan*  
Robert A. Sullivan  
Director Chemical Department

RAS:LS

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# Manganese content practically nil!

Meets specifications of

Rubber Tile

Manufacturers

Association

for manganese content!

see Skinner & Sherman laboratory report

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great chemical uniformity.

B. This uniformity is maintained in transit.

C. This uniformity is maintained in the refinery.

D. All of this has been due to the unselfish cooperation of highly competitive manufacturers and shippers who have constantly striven for product improvement.

#### Chemistry of Shellac

**M**ANY a chemist when first confronted with shellac knows that it is alcohol soluble and that it can be dispersed in aqueous, alkali systems. He usually then consults the literature and although the published information is somewhat fragmentary, he is able to draw some further conclusions on its chemical composition. The most obvious of these is that shellac consists of monomeric and polymeric groups which when isolated are not film forming substances in themselves but in their unique arrangement within the Lac they exhibit this property. Most of the natural resins consist of monomeric molecules which do not polymerize. Their acids are dissolved in essential oils which are not found in Lac. Most give characteristic reactions for tannin or sterols.

In contrast to them shellac remains in a totally different category. When Lac acids are saponified they are 90% aliphatic compounds while soaps of natural resin acids are oxidized terpenes. Shellac forms three dimensional polymers on heating. Lac should be considered as a solid solution. Many expressions based on very sound work have been published to express the functional relationships of these groups. In the writer's opinion that set forth by Dr. B. S. Gidvani has proven very satisfactory.

This ignores the small percentage of wax which the refiner removes. In this arrangement it is obvious that esterification can take place two ways:

1. By reacting the hydroxyl groups with acids.

2. By reacting the carboxyl groups with alcohols.

The main acid constituents are trihydroxy palmitic acid (Aleuritic) which was successfully isolated by Gardener, and a hydro aromatic dicarboxylic (shellolic) acid. Since there are numerous hydroxyl groups in functional positions, one can correctly assume that the alkali soaps of these acids would be water soluble.

Accordingly, saponification proceeds in two stages:

A. The free acid groups are first neutralized.

B. Continued refluxing causes a cleavage of the lactide linkages exposing the acid groups which are then taken up.

Many water emulsion wax manufacturers have found it to their advantage to apply this fact and prevent this cleavage from occurring by restricting their temperatures when dispersing shellac. The shellac most water emulsion wax manufacturers prefer is refined dewaxed bleached shellac.

#### Proper Storage Important

**A**T this point it might be well to remind the reader that the proper storage of this item is of considerable importance. Shellac is both thermoplastic and thermosetting. Under extreme conditions it can be rendered insoluble when stored at excessively high temperatures for long periods of time. It is, therefore, wise for the manufacturer to store shellac in a cool, dry place and usually put

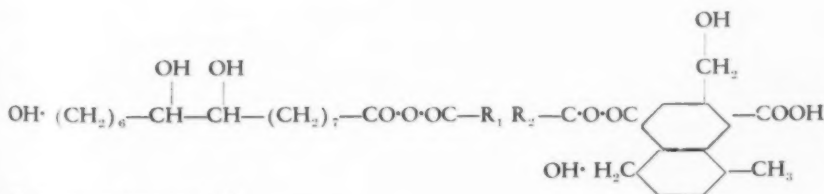
it into solution at his earliest convenience. Unless this is done all of the care which the manufacturer has lavished on the shellac in order to deliver quality material is wasted. If, through carelessness, it has blocked in shipment its quality is in no way impaired if it is ground immediately and put in solution.

#### Dewaxed Shellac

**S**INCE we have mentioned that most of the shellac purchased by the water emulsion wax industry is dewaxed, a word on this wax may be in order. Shellac wax has a melting point of 83-85°C, saponification value 85-95, softening point 68°-71°C. It can be fractionated with hot alcohol. It is insoluble in cold alcohol. The hot alcohol soluble portion consists of even numbered primary alcohols from C<sub>26</sub> to C<sub>34</sub>. The hot alcohol insoluble fractions is a mixture of esters containing even number primary alcohols from C<sub>20</sub> to C<sub>36</sub> and an even number fatty acids from C<sub>30</sub> to C<sub>34</sub>. Like shellac, the wax secreted by this tiny insect possesses exceptional uniformity.

Refined dewaxed bleached shellac is a product which has stood firmly on its own merit in filling a demand for a material which contributes toughness, levelling, lustre and shelf-life to household water emulsion waxes. Shellac manufacturers have wisely refrained from formulating finished products for their customers although they are quite cognizant of the problems involved. Since they would not have control over all materials and equipment, they realize that there are factors present which each manufacturer must work out for himself. Because of the tremendous surfaces involved within these systems they are well aware that forces are present which no physical chemist has yet been able to resolve. These forces influence stability and gloss to a great extent. Most manufacturers are today producing excellent products which more than fulfill the required performance. Some are successfully making wax emulsions which have a stabilizing effect on blends with shellac.

(Turn to Page 201)



R<sub>1</sub> R<sub>2</sub> = unknown acids

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# SILVER DIPS...

composed of thiourea, hydrochloric or sulfuric acid and a wetting agent or detergent, are modern versions of cyanide solutions used by jewelers for many years to remove tarnish.

**By Howard Brenner\***

Silver Products Co., Brooklyn

**R**ECENT months have seen the introduction of a new household and institutional chemical specialty item—instant silver cleaners. These unorthodox silver cleaners are mobile, foaming liquids capable of dissolving tarnish by chemical action, without recourse to abrasives. Objects to be detarnished are simply immersed in the solution for an instant, rinsed in running water\*\* and dried; pieces too large for dipping are wiped with a cloth previously saturated with the solution.

The use of instant silver cleaners is not limited to silver alone. They can be employed successfully when applied to copper, brass, gold, etc. They are not, however, all-purpose metal cleaners and manifest corrosive action towards certain alloys, most notably stainless steels. This behavior may be attributed to a selective dissolution of certain components of the alloy.

Most consumer reaction to instant silver cleaners has been quite favorable and several articles have recently appeared in national magazines lauding the virtues of these products (32).

Interest in the chemical removal of tarnish from metals, as opposed to conventional abrasive techniques, can be attributed to the three principal advantages which instant silver cleaners have over their antecedents: (a) the expenditure of time

and effort is greatly minimized, (b) they are more economical than abrasive polishes, and (c) there is no loss of metallic silver, other than that which appears as a chemical constituent of the dissolved tarnish. This latter characteristic is particularly desirable on thin-plated ware.

Instant silver cleaners, per se, are not new. For many years jewelers have used sodium or potassium cyanide solutions to clean their tarnished silver. In a few instances these products have been marketed. Cyanides are poisonous and misuse of them can result in death.

## Toxicity of Silver Dips

**L**OW order of toxicity is the main point of superiority of modern dip-type silver cleaners over their cyanide-containing counterparts. The essential ingredients of present-day compositions are thiourea dissolved in a dilute mineral acid solution. The literature reveals a wealth of data on the acute and chronic toxicity of thiourea (3, 4, 5, 8, 9, 11, 13, 14, 20, 22, 23, 24, 25, 29, 39, 40, 47). An analysis of the data of various investigators indicates that the minimum oral lethal dose of thiourea is greater than one gram per kilogram of body weight and has been reported to be as high as 10 g/kg. (9). Private investigations have disclosed no toxic effects at levels of 1.5 g/kg. (48, 49, 50).

Thiourea has been suggested as an inert filler in a patent (17), covering solid detergent cakes for persons whose skin is allergic to the usual alkaline soaps.



Of equal importance in the consideration of possible toxic or allergic reactions to these preparations is the nature and concentration of the acid constituent. Experimental results have indicated newer type silver cleaners will not function properly at pH values greater than one—with values of 0.5 to 0.7 preferred. The only acids capable of attaining these pH values are the mineral acids or salts thereof, e.g. hydrochloric acid, sulfuric acid or sodium bisulfate. Oxidizing acids such as nitric acid are not compatible with thiourea.

Figure 1 depicts graphically the concentrations (in per cent by weight) of each of these three mineral acids required to attain pH values of between 0.3 and 1.0.

With the possible exception of  $\text{NaHSO}_4$ , solutions of these acids in the usable pH range are not toxic if taken internally, because of the relatively low concentrations involved. The properties of HCl render it, by far, the more desirable of the three

\* Mr. Brenner is also a member of the faculty of the Department of Chemical Engineering of New York University.

\*\*Soaps or other alkaline media should not be used in the rinsing operation. In basic solution thiourea, one of the principal ingredients of the composition, reacts with silver to form silver sulfide (10), resulting in retarnishing of the silver.

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for use in instant silver cleaners. On a weight basis the concentration of HCl required to attain a given pH is less than half of that necessitated by the use of  $\text{H}_2\text{SO}_4$  and only one-seventh as much in the case of  $\text{NaHSO}_4$  (see figure 1). In addition, HCl is more compatible if accidentally introduced into the body since dilute solutions of this acid are known to occur naturally in the stomach (43). Hydrochloric acid, being a volatile material, is much less irritating to the skin of the user than either of its two counterparts. The United States Dispensatory recommends the use of a 0.5% solution of HCl as an efficient skin germicide (43).

Toxicity tests conducted by a number of toxicological laboratories (48, 49, 50) support the belief that these products are not harmful when used according to directions.

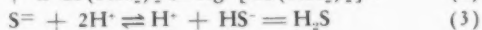
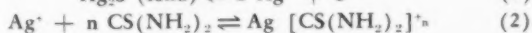
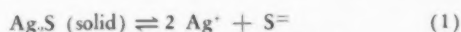
#### Chemistry of Silver Dips

**T**HIUREA,  $\text{NH}_2 \cdot \text{CS} \cdot \text{NH}_2$ , is a crystalline, water-soluble organic material. It is capable of forming stable organo-metallic complexes with a variety of metals, including silver (1, 2, 6, 19, 22, 30, 31, 33, 34, 35, 36, 37, 41, 46), copper (37, 45, 46), gold (31, 33, 35, 37), platinum (33, 35), antimony (44), bismuth (7, 44), cadmium (42, 46), chromium (46), cobalt (45, 46), iridium (27), iron (46), lead (15, 28, 46), manganese (46), mercury (33), rhodium (26), thallium (28), tin (46), zinc (38, 46).

The objectionable brown tarnish stains which develop on silver or silver-plated surfaces, which have been exposed to the atmosphere, are due primarily to the presence of silver sulfide,  $\text{Ag}_2\text{S}$ . This material forms by virtue of a chemical reaction between the silver and hydrogen sulfide gas, present in the atmosphere or in sulfur-containing foodstuffs such as eggs.

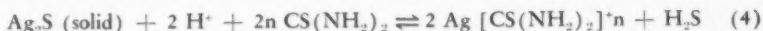
Although aqueous thiourea will readily dissolve such water insoluble silver salts as the silver halides, it has no effect upon silver sulfide because of its extremely low solubility. In order to bring about the dissolution of silver sulfide in aqueous thiourea it becomes necessary to acidify the solution with a highly ionized

acid. The reaction which proceeds under these circumstances may be depicted by the following equations:



where "n" is the coordination number of silver in the silver-thiourea complex.

The overall reaction may be summarized by:



The reaction mechanism, as illustrated above, may be interpreted in the following manner. Silver sulfide dissolves to a minute extent in water and subsequently ionizes, yielding silver-ions and sulfide-ions according to equation (1). The silver-ions combine with the dissolved thiourea to form the silver-thiourea complex ion as indicated by equation (2). These complexes are extraordinarily stable; hence, the reaction results in a large reduction in the silver-ion concentration. The sulfide-ions, furnished by ionization of the silver sulfide, combine with the hydrogen-ions, originating from ionization of the strong

mineral acid, to form hydrogen sulfide. This reaction is depicted by equation (3). In as much as hydrogen

sulfide is moderately soluble in aqueous solutions\* it is rarely formed in sufficient quantities to leave the scene of the reaction and remains in solution as the very weak hydrosulfuric

acid. The large hydrogen-ion concentration represses ionization of this weak acid, resulting in a reduction in the concentration of sulfide-ions.

The simultaneous reduction in both the silver and sulfide-ion concentrations results in a corresponding reduction of the ion product,  $[\text{Ag}^+]^2 [\text{S}^-]$ . Under these conditions more silver sulfide dissolves in an effort to re-establish the equilibrium, as dictated by the solubility product relation.

Quantitatively, the extent to which an acidified solution of thiourea will dissolve silver sulfide is determined

\*A saturated solution of  $\text{H}_2\text{S}$  is 0.1 M at 25°C.

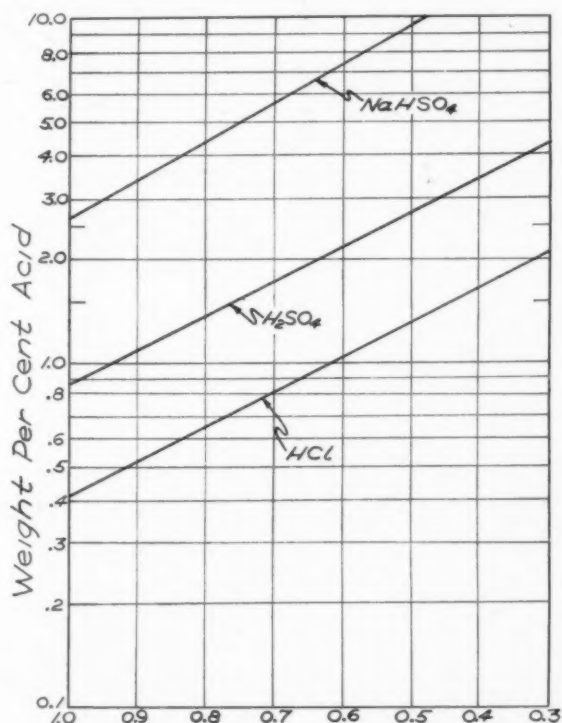
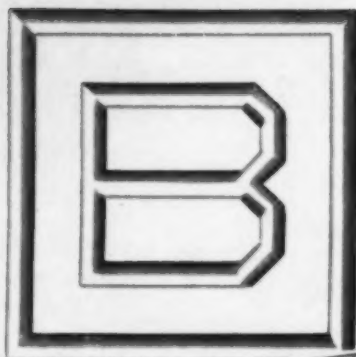


Fig. 1. The pH of mineral acid solutions.



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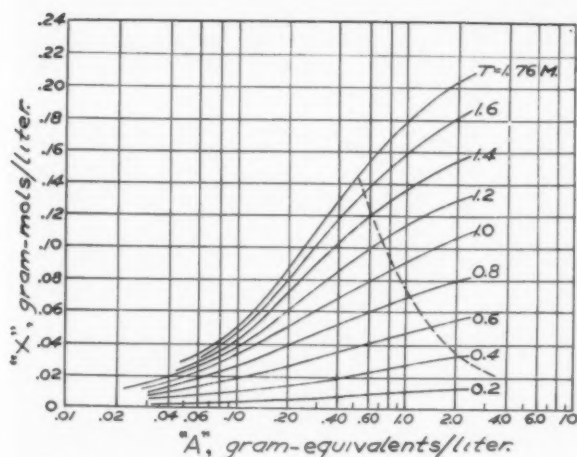


Fig. 2. The solubility of silver sulfide in acidified thiourea solutions.

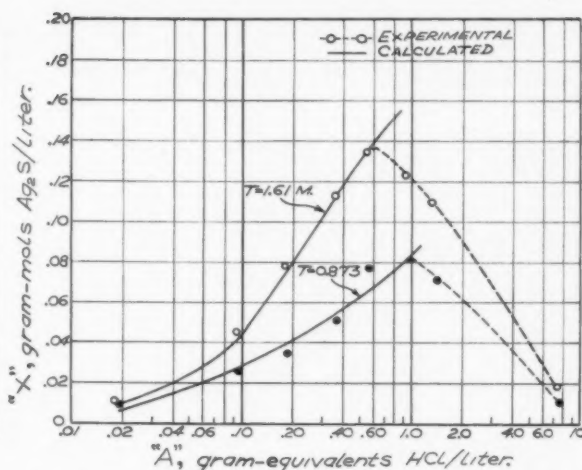


Fig. 3. A comparison between the predicted and observed solubility of silver sulfide.

by the three simultaneous equilibria given below:

$$[\text{Ag}^+]^2[\text{S}^{2-}] = K_{\text{s.p.}} \quad (5)$$

$$\frac{[\text{Ag}^+][\text{CS}(\text{NH}_2)_2]^n}{[\text{Ag}\{\text{CS}(\text{NH}_2)_2\}^n]} = K_i \quad (6)$$

$$\frac{[\text{H}^+]^2[\text{S}^{2-}]}{[\text{H}_2\text{S}]} = K_1 K_2 \quad (7)$$

where  $K_{\text{s.p.}}$  is the solubility product of silver sulfide;  $K_i$  is the instability constant of the silver-thiourea complex ion; and  $K_1$  and  $K_2$  are respectively the first and second ionization constants of hydrosulfuric acid. The quantities in brackets indicate concentrations in moles/liter.

A knowledge of the equilibrium constants in equations (5), (6) and (7), and the coordination number "n", permits a quantitative prediction of the solubility of silver sulfide in acidified thiourea solutions. This, in turn, enables one to make an estimate of the number of pieces of silver which may be detarnished by a given volume of this solution. Utilizing the known values of tense constants, available in the literature (12, 18, 19, 21), it can be shown that the solubility of silver sulfide,  $X$ , is related to the acidity,  $A$ , and the thiourea concentration,  $T$ , in instant silver cleaners by the following equation:

$$\frac{(T - 6X)^6 (A - 2X)^2}{X^3} = 8.44$$

where  $X$  and  $T$  are in moles/liter and  $A$  is in gram equivalents/liter.

An explicit algebraic solution to this equation, for  $X$  as a function of  $A$  and  $T$ , is not feasible. However, figure 2 is a graphical solution for values of  $T$  (as the parameter) between 0 and 1.76 M.—the limit of solubility of thiourea in water at 25° C., and for values of the acidity,  $A$ , between 0.01 (pH=2) and 1.0 (pH=0) gram-equivalents per liter.

The use of figure 2 is restricted to the strong acids which can be assumed to be completely ionized, i. e., the mineral acids.

It has been experimentally observed, in the case of hydrochloric acid, that at a fixed thiourea concentration an increase in the acidity resulted in an increase in solubility, in accordance with theory, until a critical acidity was attained. Beyond this point an increase in acidity resulted in a decrease in solubility. This anomalous behavior was invariably occasioned by the appearance of a white crystalline precipitate which, upon analysis, proved to be the silver-thiourea complex  $\text{Ag}[\text{CS}(\text{NH}_2)_2]_3\text{Cl}$ . It appears, then, that the complex is in-

soluble in concentrated HCl solutions by virtue of the common ion (chloride-ion) effect.

This condition is indicated by the dotted line in figure 2. The region to the right of this envelope corresponds to reduced silver sulfide solubilities at increasing HCl concentrations. No similar region exists, in the range investigated, for either sulfuric acid or sodium bisulfate—indicating that the sulfate complexes are more soluble.

In an attempt to verify the foregoing theory, a series of experiments were conducted in which the quantity of silver sulfide dissolved by a known volume of detarnishing solution was determined at varying thiourea and acid concentrations. Figure 3 is a plot of the measured solubility of silver sulfide in hydrochloric acid solutions, at thiourea concentrations of 0.873 and 1.61 M. The solid lines are the values predicted from the equation above, and the indicated points are those obtained in the experimental investigation. The excellent agreement between the theoretical and observed solubilities, up to the region of decreasing solubility, should be noted. The phenomenon of reduced silver sulfide solubility is apparent.

The results of a series of other runs are plotted graphically in figure 4 as  $X$  experimental vs  $X$  calculated. Here again the agreement between observed and predicted values should be noted.

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Figure 5 illustrates the effect of temperature on the solubility of silver sulfide in a solution of fixed composition.

Statistical data compiled in another laboratory (51) has indicated that the weight of silver sulfide present on heavily tarnished silver is between 0.08 and 0.27 milligrams per square-inch of surface area. If it is assumed that an average piece of silver has a surface area of 10 sq. in., then it can be shown that an eight ounce bottle of a typical instant silver cleaner will successfully clean between 2500 and 8000 pieces of heavily tarnished silverware. Since these figures represent conservative estimates, the economy of this method of silver cleaning is indisputable.

#### Rate of Silver Cleaning

**I**N view of the fact that these products are sold as instant silver cleaners, then in addition to their tarnish removal capacity, another criterion of quality is the rate of tarnish removal. Qualitative evidence indicates that the rate at which tarnish is dissolved is directly proportional to both the thiourea and hydrogen-ion concentrations.

$$\text{Rate} = k [H^+] [CS(NH_2)_2] \quad (9)$$

On this basis, mild acids such as citric and tartaric acids, although they possess sufficiently large reserve acidities to result in moderate tarnish

removal capacities, do not furnish large initial hydrogen-ion concentrations—and will not result in the instantaneous action characteristic of instant silver cleaners. Consequently, only the highly ionized acids previously discussed may satisfactorily be used in these preparations.

It is apparent from the rate equation that considerable latitude exists in the choice of acid and thiourea concentrations required to attain a specified rate of tarnish removal. Thus, the same rate may be achieved by a high thiourea content and low acidity or vice-versa. Although economic considerations give preference to the latter choice, the fact that the product should not be irritating to the skin of the user is the governing factor. This necessitates that the acidity be kept at a minimum, and yet still be consistent with high silver cleaning capacities.

A few successful formulas, compatible with the previous discussion are given below. Formula using HCl is to be preferred.

FORMULA No. 1

	Parts by Weight
Thiourea	8.0
Hydrochloric acid, (37.5% grade)	5.1
Water soluble perfume	0.3
Detergent and/or wetting agent	0.5
Water	86.1
	100.0

FORMULA No. 2

Thiourea	8.0
Sulfuric Acid (98%)	0.3
Water soluble perfume	0.5
Detergent	87.7
Water	100.0

#### Limitations

**T**HE principal consumer objections to instant silver cleaners are: (a) lack of polishing ability, and (b) the unpleasant aroma of hydrogen sulfide given off in using these cleaners. Lack of polishing ability is inherent in a product of this nature, since it does not depend upon abrasives for its action. Most manufacturers have attempted to solve the latter problem with a volatile odor mask. The odor problem is not unique and still plagues depilatory and home permanent wave manufacturers. The successful solution of the problem of finding a suitable deodorant for instant silver cleaners has not been discovered yet. Indeed, the problem of finding an odorant which is stable in these preparations is a challenge in itself.

This author has found that benzaldehyde (artificial oil of bitter almonds) — present in concentrations of 0.1 to 0.3 percent is both stable and moderately effective in masking the unpleasant odor of hydrogen sulfide. Benzaldehyde, and most other

(Turn to Page 183)

Fig. 4. A comparison between the predicted and observed solubility of silver sulfide.

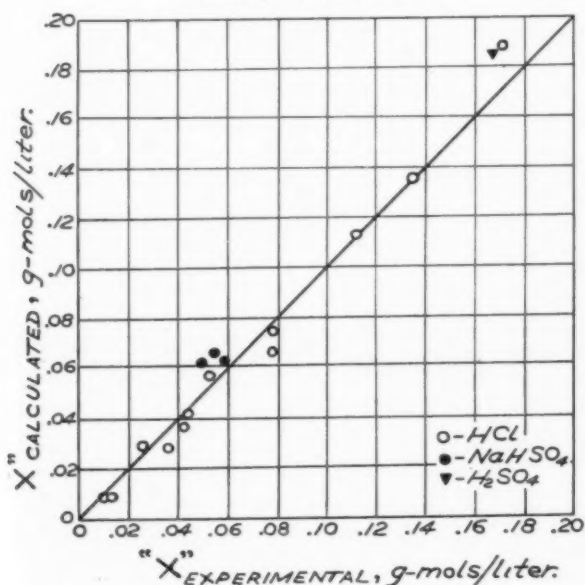
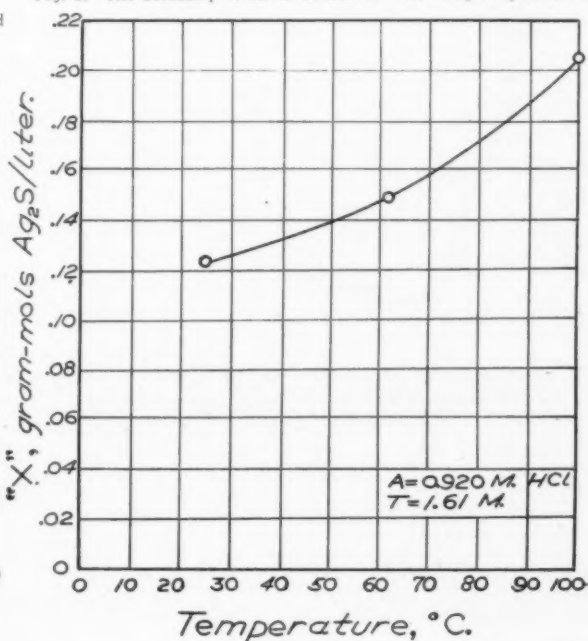


Fig. 5. The solubility of silver sulfide at increasing temperatures.





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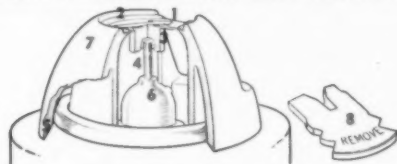


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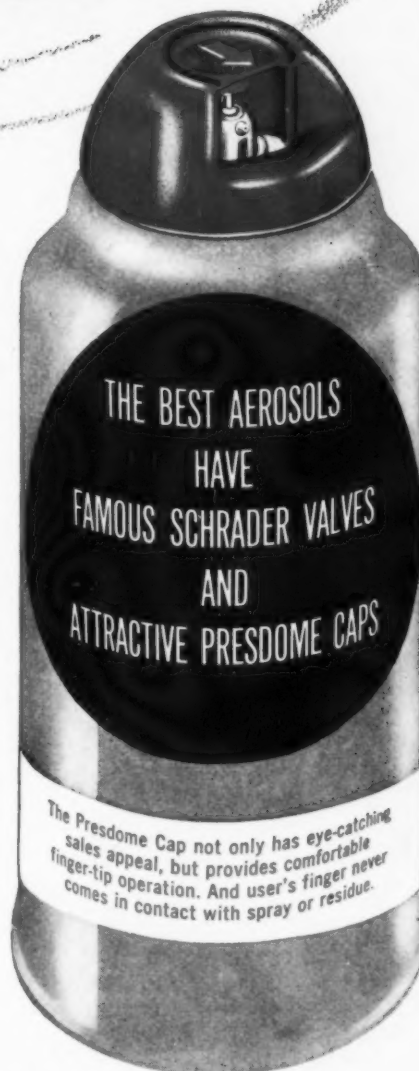
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# Automobile Polishes

By William W. Lewers

**I**N finishing an automobile the metal surface is first cleaned, after which one or more coats of primer and surfacer are applied. These serve as an anchor for the top coat or coats which consist of pigmented nitrocellulose lacquers or synthetic resin finishes. On exposure to the weather all finishes tend to deteriorate. This deterioration is due to a combination of the following factors: action of ultra violet light, visible light, rain, wind, dust, salt spray in coastal areas, and various additional contaminating substances which are carried in the air of all cities and industrial communities. For a polish to function in gloss production and protective capacity the accumulation must first be removed.

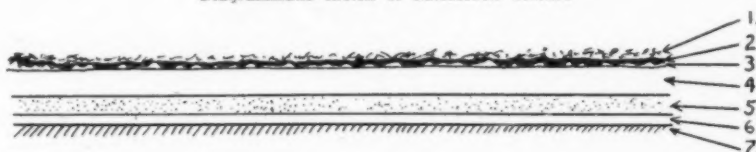
The characteristics of the surface on which our product must act are illustrated in the accompanying following diagrammatic sketch, which of necessity is not in exact proportion but will serve to illustrate.

The top layer (1) is composed of loosely adhering particles which microscopic and chemical examination has shown to be composed mostly of silica. Particle size varies from very fine up to a range which if not re-

moved prior to polish application would severely scratch the underlying finish. This top layer is best removed by washing the car prior to the use of polish. The washing operation is facilitated by the use of soap or synthetic detergents, the latter, especially the non ionics, being preferred.

Film, shown as 2 in the drawing, is mainly organic in character, coming from automobile exhaust gases, road tars, and various types of con-

Diagrammatic sketch of automobile surface





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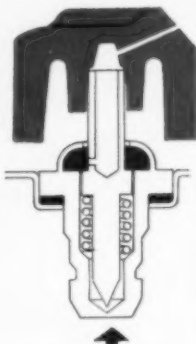
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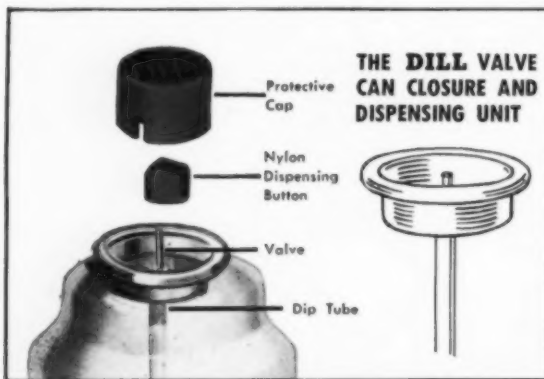
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taminating elements from factories, etc.

Partially deteriorated finish is shown in layer 3, which is made up of pigment particles which are no longer completely surrounded by the lacquer or synthetic resin vehicle. Layers 2 and 3 should be removed by the polishing operation.

The remaining layers which should not be effected by the polishing operations are as follows: (4) Non deteriorated top coat; (5) Surfacers; (6) Primer; and (7) Steel.

### Two Polish Types

**B**ASICALLY there are two types of automobile polish: the two operation type in which the actual polishing operation is preceded by the use of a cleaner, and the single operation type in the use of which both cleaning and polishing take place simultaneously. The *two operation types* are:

#### I—Liquid types:

a) Emulsified liquid cleaner containing an abrasive (cleaner)

b) Emulsified liquid polish containing mineral oil, waxes, and silicone, singly or collectively.

#### II—Paste types

a) Paste cleaner containing abrasive (cleaner).

b) Paste polishing wax containing a blend of hard and soft waxes and hydrocarbon thinner. Silicones are sometimes employed.

#### Single operation types:

#### I—Liquid types

a) A non-abrasive oil in water emulsion containing raw, blown, or boiled castor oil with or without resin plus a petroleum hydrocarbon.

b) An oil in water emulsion of mineral oil containing an abrasive in suspension. Products of this type have been made which contain a blend of hard and soft waxes, silicones or both waxes and silicones.

II—Paste types—Wax abrasive pastes containing hard and soft waxes and a suitable organic liquid thinner. Some products of this type contain silicones.

A high quality automobile polish must be: 1) fast and easy to use; 2) produce a high, long lasting mirror-like gloss; 3) should with regular

use render the finish more durable by providing a protective film which will:

- a) Shield the lacquer or synthetic resin finish from the destructive action of the elements to which it is exposed;
- b) Be water repellent;
- c) Not water spot;
- d) Facilitate car washing;
- e) Not collect dust;
- 4) not harmful to the finish.

### Fast and Easy to Use

**A**N examination of the annual "Index to Patents Issued by The United States Patent Office" in the last ten years indicates that the number of patents on mechanical polishing devices outnumbers those on polishing compositions by about three to one. Inventors in general are quick to recognize the desires of the public which demand ease of application as an essential of any polish. This does not mean that the chores of polishing are to be taken over in the near future by a group of nationally distributed polish robots. It does indicate that a polish whose successful use requires more than a minimum of time and labor is merchandised under a definite sales handicap. Since the labor involved in application is in direct proportion to the size of the object polished the above remarks apply with especial emphasis in the automotive field.

Viewed in the light of this requirement the two operation types are definitely out of the running. In the single operation field type 1a, the non-abrasive castor oil type, has been found to require considerable rubbing and cannot be described as fast or easy. Both type b, the emulsified abrasive type and type II, the paste abrasive type, when properly formulated fulfill the first requirement. It has been found that the use of carefully balanced blends of hard and soft waxes materially improve the working properties. In addition certain specific types of silicone, especially when used with the proper wax blends, afford still further improvement. In general the paste type products have the advantage in ease of rub off.

The above "must" should be self-evident, for the words polish and

gloss are to a certain extent synonymous. For this reason we shall give a brief description of gloss and the methods of gloss evaluation which pertain to automobile polish.

A polish, according to Webster, is "a preparation used to produce gloss." This simple definition would be perfectly satisfactory were it not for the fact that an adequate characterization of the term gloss presents certain difficulties. These difficulties arise from the fact that the over-all impression which causes an observer to say "This surface has excellent gloss" is gained from a number of distinctly different qualities. Let us examine some of these qualities which contribute to the pleasing attributes of a well polished surface.

Gloss has been defined as the ability of a surface to reflect light regularly. This regular (specular) reflection can be accurately measured by a number of instruments such as the Hunter Multi-purpose reflectometer, the Photovolt gloss meter, and others. The above type of gloss measurement, which is known as objective, is especially satisfactory for automobile polish evaluation because the results are not dependent on the color of the surface polished. Another type of gloss measurement which depends on the sharpness of the image reflected from the surface under consideration is also useful in polish evaluation. Instruments of this class which have been designed by Wolff, Pfund, Ewald, Svard, Hunter and others will sometimes bring out gloss differences not shown by an objective type meter.

Smoothness or evenness, while in some respects a characteristic of texture rather than gloss, is very important in polish evaluation, as it is closely related to the depth of finish. Deep tone finishes have a greater apparent gloss than objective meter readings indicate. Depth of tone shows up in a very striking manner on surfaces which are free from dust, grease smears or other forms of contamination which permit an observer to fix the point at which the surface really begins. It is the observer's inability to fix visually such a point that creates the illusion of depth. No satisfactory

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method for the quantitative measurement of depth has been developed thus far.

Insofar as the two operation type is concerned, the abrasive cleaner, be it either of the liquid emulsified or the paste type, merely serves to remove the traffic film (organic layer No. 2) and the partially deteriorated portion of the top coat (layer No. 3) which has no further protective value. Cleaners of this type do a good job insofar as the removal of traffic film and deteriorated top coat is concerned, but due to the fact that such compositions contain the same type of fast cutting, comparatively harsh abrasives that are employed in automobile body finishing plants, by far too much non-deteriorated finish is removed. When using cleaners of the type referred to it is not at all uncommon to completely remove the top coat in spots, thus exposing the drab colored dingy looking surface.

The second operation of the two operation job will usually produce pleasing results provided, of course, that the first operation (abrasive cleaner) has not gone too far. Of the types listed the paste is preferred because in general it is possible to obtain a higher and deeper toned gloss than with the emulsified product. While the proper balance of hard and soft waxes is of major importance the use of certain specific silicones has been found to be of value, as the apparent gloss is thereby enhanced by greater tone depth.

#### **Regular Use . . .**

**T**HE durability of properly formulated paste waxes is generally superior to that of emulsified compositions containing identical active polishing ingredients. There are a number of reasons for this, the following being most significant:

a) Paste waxes give a higher initial gloss than emulsified waxes; assuming the gloss producing elements are similar the product giving the higher initial gloss will show proportionately longer gloss retention under similar conditions of exposure.

b) Since paste waxes contain a higher percentage of active polish-

ing ingredients than emulsified waxes greater penetration into the pores of the finish takes place. This results in better anchoring with consequent enhanced durability.

c) Many emulsified waxes contain water soluble agents of a non-volatile character which become a part of the polish film. Films of this character lack water resistance.

If a drop of water is placed on a solid surface it may either spread into a flat layer or draw itself into a more or less spherical form depending upon the relative surface forces. The angle which the drop makes with the solid surface is known as the contact angle. If the water completely wets the surface the angle is zero. In order to be effective in repelling water, reducing the tendency to water spot and to facilitate car washing, the polish film must have a contact angle as near to 90° as possible. At a contact angle of 90° water touches the surface as a perfect sphere. The point of contact is infinitely small and the water droplets literally roll from the surface. While a 90° contact angle is not possible of attainment the ideal can be approached in a polish containing the proper blend of hard and soft waxes. Since silicones are very strongly organophilic their introduction still further enhances the water repelling attributes of the wax film.

In the single operation polish type the non abrasive castor oil emulsion type usually gives a high initial gloss, but the film being soft and sticky collects dust rapidly with consequent early loss of gloss.

Type b), the simplest member, being merely an oil in water emulsion of mineral oil containing abrasives in suspension, has been quite popular for many years. Properly formulated members of this group are easy to apply and give a good gloss which, however, is far from lasting. The introduction of waxes and/or silicones offers some improvement, but the same comparison as given for the non-abrasive types holds here also, i.e., the pastes give a much superior overall result.

Low coefficient of friction is a very important attribute of a good automobile polish because, in addition

to promoting ease of application, surfaces which possess a low coefficient of friction shed dust and dirt readily. Films composed of properly formulated wax blends containing silicone are outstanding in this respect.

#### **Must Not Harm Finish**

**W**HILE lack of harm to the finish is a perfectly obvious requirement, it merits a certain amount of discussion because the number of products marketed just to sell, without regard to possible harmful effects, has been a legion. These have been confined, for the most part, to the field of liquids, the majority being emulsions of varying degrees of stability.

The pH of any polish which contains a substantial amount of water should be between 9.5 and 5.5. Alkalinity above 9.5 or acidity below 5.5 can harm both the binder and some of the pigments.

Satisfactory cleaning, whether accomplished with a pre-wax cleaner or with a single operation cleaner-polish requires the use of abrasives. It has been generally accepted that rapid cleaning can only be accomplished by the use of relatively harsh abrasives. While it is true that removal of the deteriorated layer from a severely weathered finish requires the use of a pre-wax cleaner, similar in abrasive type and content to the rubbing compounds used in body finishing plants, a satisfactory job can be done on most finishes without such strenuous treatment. Too frequent use of pre-wax cleaners removes top coat at a much faster rate than the combined action of all the destructive elements to which the finish is exposed in normal use.

#### **Conclusion**

**P**OLISHES function by laying down a thin film on the surface of the automobile top coat. In order that this process may take place it is necessary that a clean surface must be provided by one of the methods described heretofore. When a mineral oil or blend of waxes in paste form is rubbed on a clean pigmented lacquer or synthetic resin surface in strong  
(Turn to Page 183)



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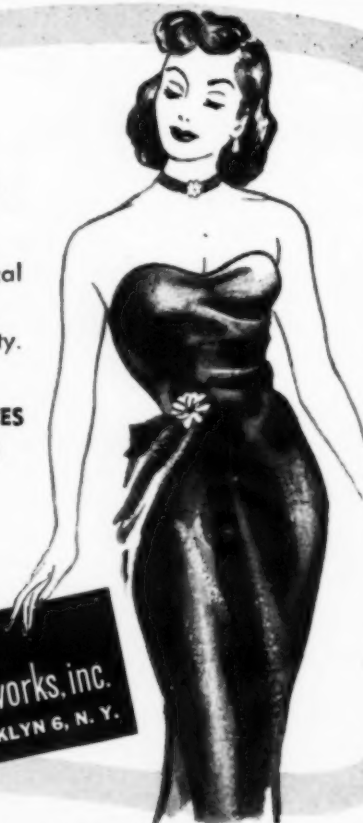
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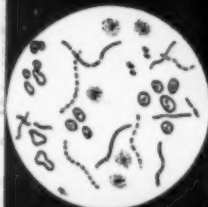
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**E**RYSIPELOID, also known as "fish-bone disease" or "fish handlers' disease", is a major cause of disability among commercial fishermen as well as workers in other industries. The causative organism, *Erysipelothrix rhusiopathiae*, is a very small, gram-positive, non-sporulating rod. This bacterium is also pathogenic for many domestic animals, causing polyarthritis in sheep, swine erysipelas,

curring as a sharply defined, purplish-red zone on the fingers and hands, rarely extending above the wrists. The rash is accompanied by intense itching and burning, enlargement of the regional lymph nodes, and frequently by a mild arthritic condition. This form lasts two to four weeks as a rule, but may reoccur.

2) A diffuse or generalized eruption which progresses from the

methods for the control of this problem.

Eight strains of *E. rhusiopathiae* were obtained and from these, the one with the greatest resistance toward chlorine was selected for experimental purposes. Since the most luxuriant growth of this organism was obtained in brain-heart infusion with 1.0 percent albumin, this medium was used for the majority of subsequent

## New Disinfectant Role...

### Sodium hypochlorite disinfectant found useful in controlling fish-bone disease

By J. G. Ellis and C. K. Crocker\*

Diversey Corp. Research Laboratories, Chicago

joint-ill in lambs, and infections in cattle, horses and fowl.

*Erysipelothrix rhusiopathiae* was originally recognized and isolated by Koch in 1880 from diseased mice. Three years later, Pasteur recovered the same organism (or a similar one) from pigs which were dying of rouget. Rosenbach, in 1909, found the same type of bacteria in a human case of dermatitis. For this reason, the disease is often referred to as "Erysipeloid of Rosenbach." (1)

The organism has a wide distribution in nature, growing readily in decaying animal or vegetable matter. (2) In fisheries, the main habitat of *Erysipelothrix rhusiopathiae* is the slime which is always present wherever fish are handled or processed. When associated with fish slime, the disease assumes its greatest virulence. (3) These bacteria are somewhat resistant to harmful influences such as drying, sunlight, and chemical disinfectants. This is probably due, in part, to a waxy covering which surrounds each cell. (4)

The disease may manifest itself in three forms: (5)

1) A mild, local infection oc-

curring as a sharply defined, purplish-red zone on the fingers and hands, rarely extending above the wrists. The rash is accompanied by intense itching and burning, enlargement of the regional lymph nodes, and frequently by a mild arthritic condition. This form lasts two to four weeks as a rule, but may reoccur.

2) A diffuse or generalized eruption which progresses from the site of inoculation with various constitutional symptoms, articular pain, and fever. Lesions appear and disappear at varying intervals over the entire body. The condition may persist for months, but recovery eventually ensues.

3) The septicemic form is characterized by the presence of the responsible bacteria in the blood stream, eruptions of a purpuric nature on the hands, and a hematoma-like swelling of the ears. Varying degrees of arthritis and endocarditis, which may prove fatal, are often present.

Treatment of all forms of the disease usually consists of wet dressings, immobilization of the affected parts combined with penicillin therapy. Since erysiploid occurs so frequently in fishing, poultry and meat-packing industries, and the nature of the disease is such that those who do contract the infection are disabled for several weeks, it would seem desirable to institute procedures which would decrease its incidence as far as possible. The Diversey Research Laboratories have carried out extensive studies on this subject in an attempt to develop effective cleaning and sanitizing

methods for the control of this problem.

Eight strains of *E. rhusiopathiae* were obtained and from these, the one with the greatest resistance toward chlorine was selected for experimental purposes. Since the most luxuriant growth of this organism was obtained in brain-heart infusion with 1.0 percent albumin, this medium was used for the majority of subsequent tests. Plating methods were attempted, but because of the small size of the colonies formed by *E. rhusiopathiae*, these tests were not practical for this particular application. Preliminary tests, using the standard Food and Drug Administration method and *E. rhusiopathiae* as test organism, confirmed the fact that the bacterium is rather resistant to chemical disinfection. It was determined, however, that hypochlorites were among the most efficient of the chemical disinfectants used. The F.D.A. method indicated that the bacteria were consistently killed in five minutes by "Diversol",\*\* a sodium hypochlorite germicide, if a chlorine concentration of 200 ppm. in distilled water were used. The presence of 400 ppm. hardness and 0.9 percent salinity had no deleterious effect on the activity of "Diversol". Equally good kills were observed throughout a wide range of temperatures (Table No. 1).

The Stuart ring-carrier technique (6) was employed in order that a broader interpretation might be gained. In this test, stainless steel cylinders are contaminated with the bacteria, semi-dried, and exposed to the disinfecting solutions for 10 minutes.

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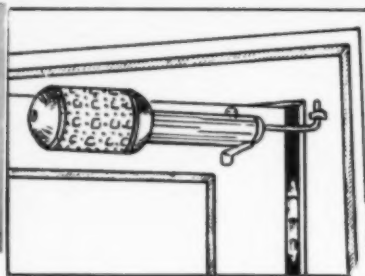


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Table No. 1

Ppm. Cl <sub>2</sub>	40°F.				50°F.				60°F.				20°F.			
	Dist. Water		Hard Water		Dist. Water		Hard Water		Dist. Water		Hard Water		Dist. Water		Hard Water	
	5 Min.	10 Min.	5 Min.	10 Min.	5 Min.	10 Min.	5 Min.	10 Min.	5 Min.	10 Min.	5 Min.	10 Min.	5 Min.	10 Min.	5 Min.	10 Min.
500	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
400	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
300	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
250	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
150	+	+	+	—	+	—	+	—	+	—	+	—	+	—	+	—
125	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
100	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
75	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
50	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

At the end of the contact time, they are transferred aseptically from the germicide to tubes of broth, which are incubated for forty-eight hours. Re-

now obtained with 50 ppm. chlorine in sea water in contrast to the previous 220 ppm. necessary with distilled water.

Table No. 2

400 PPM. Cl <sub>2</sub>		200 PPM. Cl <sub>2</sub>		100 PPM. Cl <sub>2</sub>		75 PPM. Cl <sub>2</sub>		50 PPM. Cl <sub>2</sub>	
Positive Tubes	Negative Tubes	Positive Tubes	Negative Tubes	Positive Tubes	Negative Tubes	Positive Tubes	Negative Tubes	Positive Tubes	Negative Tubes
0	8	0	10	1	9	1	9	4	6

sults of this test are shown in Table No. 2.

Table No. 3 demonstrates the effectiveness of "Diversol" against *E. rhusiopathiae* when the germicide is made up in sea water instead of distilled water. The presence of the sea water produces an interesting and valuable phenomenon. An effective kill is

now obtained with 50 ppm. chlorine in sea water in contrast to the previous 220 ppm. necessary with distilled water. Another series of tests were conducted, making use of the pathogenicity of *E. rhusiopathiae* for mice. In this test, 0.5 ml. of a 24-hour broth culture were aseptically placed in sterile vaccine bottles. Five ml. of the desired concentrations of "Diversol", or "Diversol" and sea water, were added to the bacterial suspension

and agitated. After a contact time of five minutes, 3.0 ml. were withdrawn from the bottles and 0.5 ml. of the mixture injected intraperitoneally into each of six mice. Since the inoculation of a mouse with very few viable bacteria is certain to cause death, this technique demonstrates germicidal activity most accurately. As the infection in mice causes a fatal septicemia, the cause of death could be confirmed by microscopic examination of the hearts' blood for the presence of bacteria. The results of these experiments are shown in Table No. 4.

The results of the studies described indicate that erysipeloid can be controlled in the fishing industry if positive steps are taken to eradicate the responsible bacteria from the work area. The procedures instituted cannot be of a hit-or-miss character or haphazardly carried out. They must be included as part of a continuous routine to be performed as often throughout the working day as is practicable. This is necessary since fresh contamination is continually being deposited with each new quantity of fish.

The presence of organic materials such as fish oil, slime, scales, entrails, and decaying flesh greatly reduces the effectiveness of germicides. Therefore, all surfaces which have come in contact with the fish must be thoroughly cleaned with an adequate detergent. When clean, the areas and objects should be disinfected with a strong hypochlorite solution for a period of five minutes. "Diversol"

Table No. 4

## Diversol in Distilled Water:

Ppm. Cl <sub>2</sub>	No. of Mice Inoculated	No. of Survivors	Average No. of days before death
200	6	6	—
150	6	1	3
100	6	0	3
50	6	0	2
0	6	0	2

## Diversol in Sea Water:

Ppm. Cl <sub>2</sub>	No. of Mice Inoculated	No. of Survivors	Average No. of days before death
200	6	6	—
100	6	6	—
50	6	6	—
25	6	1	4
0	6	0	2

Table No. 3

Ppm. Cl <sub>2</sub>	Distilled Water		Sea Water	
	5 min.	10 min.	5 min.	10 min.
300	—	—	—	—
250	—	—	—	—
200	—	—	—	—
175	+	—	—	—
150	+	—	—	—
125	+	+	—	—
100	+	+	—	—
75	+	+	—	—
50	+	+	—	—
25	+	+	+	+
12.5	+	+	+	+

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made up in fresh water should have a concentration of 250 ppm. chlorine. If sea water is used, 150 ppm. chlorine will provide a good margin of safety. All implements, knives, etc., which are used in processing the fish should occasionally be immersed in the germicide. During processing, frequent hosing of the work area should be accomplished in order to prevent too great an accumulation of debris. Dipping the hands periodically in the chlorine solution will greatly reduce the possibility of infection should the skin be punctured or otherwise broken. If these recommendations are carefully followed, not only should the incidence of erysiploid be greatly reduced, but also the bacteriological quality of the final product should be improved.

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## Auto Polishes

(From Page 175)

sunlight interference patterns (rain-bow effects) develop at a certain stage of the rubbing, which disappear as the rubbing is continued. This clearly indicates that the surface layer of the polish film has a thickness less than the wave length of light. Film thickness measurements conducted with the aid of radio active tracer compounds confirm this observation. Thus we see that we are dealing with an extremely thin film whose ability to protect must of necessity depend on the ability to penetrate below the surface of the pigmented lacquer or synthetic resin finish. Waxes have been shown to have excellent penetration characteristics on many types of porous surfaces, which is one of the major contributing factors to the durability of waxed surfaces.

It is the writer's considered opinion that the use of a wax paste containing a mild abrasive of the air floated diatomaceous type at regular

intervals will maintain the new car look far longer than any of the other products discussed.

#### Dow Names Everson

Appointment of J. W. Everson as assistant manager of the market research department of Dow Chemical Co., Midland, Mich., was recently announced by Donald Williams, director of sales. Mr. Everson joined Dow in 1946, spending the next four years in plastics technical service. In 1950 he joined the market research department as an analyst and sales forecasting specialist.

## Silver Dips

(From Page 167)

oil-soluble perfumes, may be rendered water-soluble by the addition of an equal volume of an acid-stable solubilizing agent such as "Triton X-100" (Rohm and Haas Co., Philadelphia).

In addition to these ingredients, most commercial formulas include an acid-stable detergent and/or wetting agent to enhance their effectiveness. Non-ionics, such as "Triton X-100," have proven their usefulness in this respect.

The economy, simplicity, and versatility of instant silver cleaners would seem to assure their future as staple items. Conventional abrasive polishes will probably supplement the new silver cleaners—rather than be supplanted by them.

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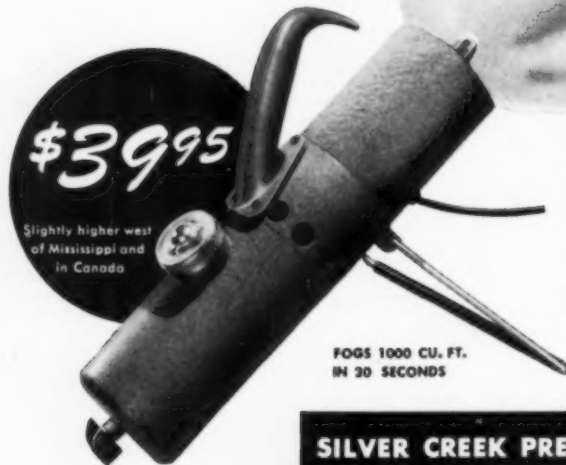
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Fire Point C.O.C.....	140/145
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Unsulfonatable Residue..	98%
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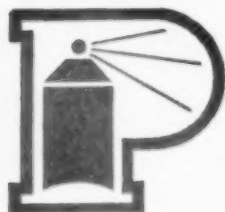
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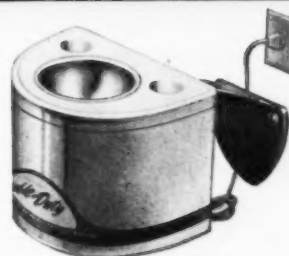
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# News

## Peterson Heads Continental

Harry E. Peterson has been appointed president of Continental Filling Corp., Danville, Ill., private brand



H. E. PETERSON

manufacturers and custom fillers of aerosols and other chemical specialties, according to an announcement by Clarence F. Carter, former president and now chairman of the board. Mr. Peterson was formerly vice-president and general manager. J. Allen Reynolds has been promoted from production manager to vice-president in charge of operations. R. Chris Canaday has been made vice-president and secretary, and J. A. Miller, treasurer.

Robert J. Peterson has been advanced to sales manager of the com-

pany. S. Jack Campbell has been transferred from research to the sales department and Clarence "Pete" Clapp has been made manager of the Re-



CLARENCE P. CARTER

search Department. John Marana is the newly appointed plant superintendent of Continental's Danville plant and John Kraning is plant manager of the company's Hobart, Indiana, plant.

Continental's personnel changes according to Mr. Carter, have resulted from a continued growth in the firm's operations, including its recent entry into filling cosmetics, chemical specialties and other liquid products. Heretofore, the company specialized only in pressurized package filling.

its products are safe, non-toxic or harmless only when they are used in accordance with the directions on the label.

The company must not represent that "Bostwick Moth Proofer" is effective in protecting woolen materials from moths for one year, or any specified period, unless it clearly discloses that woolen materials must be re-treated after dry-cleaning or laundering the FTC ordered. Further, the company may not claim that its product is the only insecticide on the market that mothproofs.

The FTC also ordered Bostwick to discontinue stating in its advertising that DDT has been barred

for use near children and pets by the United States Government or any other official agency, or that the Department of Agriculture has recommended that methoxychlor be substituted for DDT except for the control of flies around dairy barns and on dairy cows, and that methoxychlor kills more insects than DDT.

## New Egg Cleaner-Sanitizer

An egg washing compound designed to clean and sanitize in a single operation was introduced recently by Alex C. Ferguson Co., Philadelphia, under the trade name "AFCO 2626". The product is claimed to be fast acting, effective in both hard and soft water, non-acid, harmless to the shell and non-corrosive to metals. The cleaner-sanitizer acts against *Pseudomonas fluorescens* and other bacteria. The product cannot be mixed with soap or synthetic detergent.

## Collinsworth Velsicol V.P.

Appointment of E. T. Collinsworth, Jr., as vice-president of Velsicol Corp., division of Arvey Corp., Chicago, was announced recently. Previously director of business research for the phosphate division of Monsanto Chemical Co., St. Louis, Mr. Collinsworth is a chemical engineer and a graduate of Harvard School of Business. In his new post he is acting as administrative assistant for the chief operating executive of Velsicol Corp. Mr. Collinsworth is a member of the American Management Association and the Chemical Market Research Association.

E. T. COLLINSWORTH



## Dustbane Acquires So-Clean

So-Clean Products, Agincourt, Ontario has recently been taken over by Dustbane Products, Ltd., Leaside, Toronto, Canada, manufacturers and distributors of cleaning materials and sanitary supplies.

## FTC Cites Bostwick Claims

Bostwick Laboratories, Inc., Bridgeport, Conn., was ordered recently by the Federal Trade Commission to stop advertising that "Bostwick Super-Aerosol Insect Killer" kills all crawling insects and kills insects faster than other insecticides now on the market. The FTC also said that the company may claim that



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Tests at a leading scientific laboratory prove Metho-Nox to be one of the safest insecticides yet developed. It also shows 100% kill. Write for complete reports.

**Columbia Chemical Co., Inc.**

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Benzene hexachloride plant in Baton Rouge, La., of Ethyl Corp., New York, where new facilities for the large scale production of lindane are to go into operation shortly. Ethyl is also producing in commercial quantities the herbicide 2,4,5-7 for use against mesquite, poison ivy, etc.

### New Soil Conditioner

A new soil conditioner being marketed under the tradename of "Tronatil", was announced recently by the Eston Chemical Division of American Potash & Chemical Corp., Los Angeles. "Tronatil" contains vinyl acetate-maleic anhydride copolymer resin. Use of this material is licensed under patents recently issued to the Monsanto Chemical Co. of St. Louis. Eston is marketing "Tronatil" nationally through established dealers and wholesalers in five, ten and 50 pound packages.

### Md. Exempts Pesticides

Insecticides and fungicides are exempt from the Maryland State sales tax under a bill recently enacted in the Legislature and now awaiting the Governor's signature. Sponsors of the bill maintained that these chemicals are as vital to the agricultural economy as fertilizers, which have been exempt for some time.

### Pernet Claims Challenged

Advertising claims made by Rudolf R. Siebert Co., Rochester, N. Y., for "Pernet", a liquid silver polish, were challenged recently by the Federal Trade Commission. The product contains about 30 percent carbon tetrachloride, according to FTC officials, and has been advertised by Siebert as not dangerous or harmful.

According to the FTC "Pernet" may cause serious illness or death when used in a closed room or in any place without adequate ventilation. When contact with it is frequent and

prolonged it may cause injury to the skin. The producer also guaranteed that "Pernet" did not contain cyanide or other harmful materials.

### Johnson Atlanta Meeting

S. C. Johnson & Son, Inc., Racine Wis., recently held a sales meeting at the Atlantan Hotel, Atlanta, Ga. with personnel of Sanitary Supply Co., Atlanta distributor for the Johnson company. W. Fred Smith, maintenance products supervisor for Johnson in the Atlanta district office, introduced his company's new "Hard-Gloss" floor finish. He said an extensive advertising

campaign will be conducted within a few weeks to introduce the new finish.

### CSMA Board Meets in Oct.

The October meeting of the board of governors Chemical Specialties Manufacturers Association will be held at the Greenbrier Hotel, White Sulphur Springs, W. Va., on October 11, 12, 13. H. W. Hamilton, secretary of CSMA, announced recently. Members of the association's board, executive committee and other committees are invited to attend.

### New Oil Absorbent

A new, finely ground cellulose fibre material, called "Cottentex", was recently announced by Cottentex Manufacturing Co., Milwaukee. According to the company, "Cottentex" absorbs more than eight times its own weight, making it suited for absorbing oil, greases, any liquid, as well as for cleaning hands. The product is soft and non-corrosive, according to the company and it will not harm wood, concrete, terrazzo or painted floors. It does not combine with oil or grease to form a compound and it is unnecessary to use scrapers to remove it.

New compartmented mopping pail of the "Vanco" line of Atlantic Stamping Co., Rochester, N. Y., provides space for wash and rinse water. Pail on hard rubber casters is equipped with dividing partition. Capacity of one side is 35 quarts for rinse water; the other section of the pail holds 17 quarts of wash water. Space is also provided for rinsing mop and mop wringer. Pail is sturdily built of "hot dipped" galvanized steel, with leak-proof body and partition. A drop handle at one end aids in emptying.





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### Purcell Leaves Penick

John W. Purcell recently announced his resignation from S. B. Penick & Co., New York, to devote



JOHN W. PURCELL

more time to Plant Cultures, Gainesville, Fla. Mr. Purcell is president of the latter organization, which produces nitrogen fixing bacteria. In addition, he will act as a manufacturer's representative in the southeast for several producers of agricultural chemicals. Prior to joining Penick about a year and a half ago, Mr. Purcell was with Prentiss Drug & Chemical Co., New York, for 16 years. Part of that time he acted in the capacity of vice-president.

A farewell party for Mr. Purcell and Robert C. Berry, an entomologist for S. B. Penick, who has left the organization to join Newton Chemical Co., Bridgeville, Del., was given April 27 at Charles French Restaurant, New York, by a number of their associates in Penick. Mr. Purcell and Mr. Berry were presented with attache cases.

### Phillips New President

Clifford E. Phillips, former vice-president of the Perfect Circle Co., Ltd., Canada, has recently been named president of R. M. Hollingshead Co., Canada, Ltd., succeeding Stewart Hollingshead, who becomes chairman of the board of the Canadian chemical subsidiary of R. M. Hollingshead Corp., Camden, N. J.

Also announced recently by the company was the election of three new members to the board of directors of the parent company. They are D. O.

Severson, vice-president and director of sales merchandising; R. M. Hollingshead, III, and A. E. Moore, vice-president and director of research. All present officers of the Camden chemical firm were re-elected.

Mr. Severson was also elected to the board of directors and named chairman of the executive committee of Perry Co., wholly-owned subsidiary. W. H. Lukens was elected chairman of the board and M. M. Perry was named president.

### Wyandotte Has Lindane

The availability in commercial quantities of the insecticide lindane from Wyandotte Chemicals Corp., Wyandotte, Mich., was announced recently by C. F. Gerlach, manager of the company's agricultural chemicals department. A chemically stable, dry, free-flowing powder, Wyandotte lindane may be formulated as a solution or powder for insecticidal purposes. Other pesticides and related items handled by Wyandotte's agricultural chemicals line include DDT, high-gamma BHC, technical BHC, oil concentrates, wetting agents, solvents, fumigants, soil conditioners, etc.

### New Pesticide Residue Bill

A bill dealing with pesticide residues in foods has recently been introduced in the U. S. Senate by Senator George D. Aiken (Rep., Vt.). The Aiken bill is a counterpart to the House bill recently offered by Representative A. L. Miller (Rep., Neb.).

The proposal has been supported by the pesticide industry, and is favored by some farm groups. The Food and Drug Administration is studying the bill, and expects to announce its stand after its studies are complete.

### Summers Cornell Sales Mgr.

Appointment of Joseph K. Summers as general sales manager was announced recently by the sanitary chemicals division of Cornell Chemical and Equipment Co., Baltimore, Md. Mr. Summers was formerly sales and advertising manager of Uni-San Products, Inc., New York.

### Snell Appoints Kimball

Appointment of C. S. Kimball to the post of executive vice-president of Foster D. Snell, Inc., New York, was



C. S. KIMBALL

announced recently. Mr. Kimball is also vice-chairman of the Wax and Floor Finishes Division of the CSMA. Mr. Kimball, a graduate of the University of Rhode Island, started his career with Foster D. Snell in 1926. He became vice-president of the corporation in 1932 and has held that position continuously since that date.

### New Insect Sprayer

Latest unit in the line of insect sprayers made by De-Bug-Er, Inc., Madison, Wisc., is the new, improved automatic "De-Fly-Er." The new model has a longer wearing cup and a redesigned thermostat to allow for continuous operation.

### New Chlorine Compound

"Halane", recently introduced by Wyandotte Chemicals Corp., Wyandotte, Mich., is a chlorine compound suggested for use as a laundry bleaching agent. The product is claimed to have practically no deleterious effect on the tensile strengths of cottons.

The new compound, 1,3-dichloro-5,5-dimethylhydantoin, comes in solid form and has an available chlorine content of at least 66 percent, yet is stable in the dry state. It is said to be resistant to explosive decomposition and to be essentially non-corrosive in the dry form. In the presence of moisture, even moisture from the air, corrosiveness increases.



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Non-Rubbing  
Prepared Liquid  
Prepared Paste  
Powdered Dance Wax



**ELECTRIC DEODORIZERS**  
Select Aire—Air Sweet



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**Manufacturers Since 1886**  
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**Distribution makes the**  
**Difference in...**

**RESIDUAL SPRAYING**



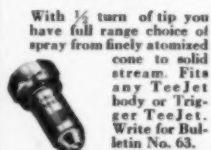
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**SPRAY NOZZLES**

Distribution of liquid particles are very important in residual spraying. TeeJet Spray Nozzles give you uniform distribution over entire pattern area... and proper atomization. Available in any capacity, nozzle assembly includes interchangeable orifice tip and strainer. Write for Bulletin 58.

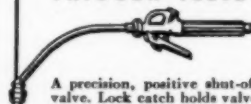
**FOR EASIER SPRAYING ON THE JOB**

**ADJUSTABLE**  
**CONEJET**



With  $\frac{1}{8}$  turn of tip you have full range choice of spray from finely atomized cone to solid stream. Fits any TeeJet body or Trigger TeeJet. Write for Bulletin No. 63.

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A precision, positive shut-off valve. Lock catch holds valve open when desired. Light in weight, comfortable. Supplied with straight or curved extensions. Use with any TeeJet Tip. Write for Data Sheet 4675.

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### Smith Joins Austin

T. W. Smith recently resigned as manager of the sanitary department of Bancroft Paper Co., Shreveport, La.,



T. W. SMITH

and is now associated with the Austin Chemical Co., Austin, Tex. Jim Durrett succeeds Mr. Smith as manager at the Bancroft Paper Co. Mr. Smith is southwestern regional vice-president for the National Sanitary Supply Assn.

### Regal 10th Anniversary

Regal Chemical Corp., Brooklyn, this month completes ten years as a filler of aerosol dispensers for the trade and government, according to an announcement by Theodore Heilig, president. As a pioneer in the aerosol industry, Regal started in 1943 filling aerosol insecticides for the armed forces. A letter from the War Production Board, dated Sept. 27, 1945, cited Regal for its "splendid performance in behalf of the war effort." As pointed out by Mr. Heilig, the WPB citation stated: "The Regal record speaks for itself. From the time you started as a pioneer in the aerosol industry, up to VJ-Day, you filled many millions of dispensers in excellent fashion, in that, you have never been delinquent in any delivery, nor have you ever had a chemical rejection."

Immediately following World War II, Regal began the production of aerosols for civilian needs, insecticides, deodorants, hair lacquers and foam products such as shave creams, shampoos, hand lotions and the like. Regal has no products of its own, concentrating wholly on contract for-

mulation and filling of insecticides, drugs and toilet goods. According to Mr. Heilig, its clients comprise leaders in the field such as Colgate, Lenthic, Squibb, and others of equal stature. Current plans call for further expansion in plant and equipment in the field of pressure filling.

### M.A.N.A. Elects Officers

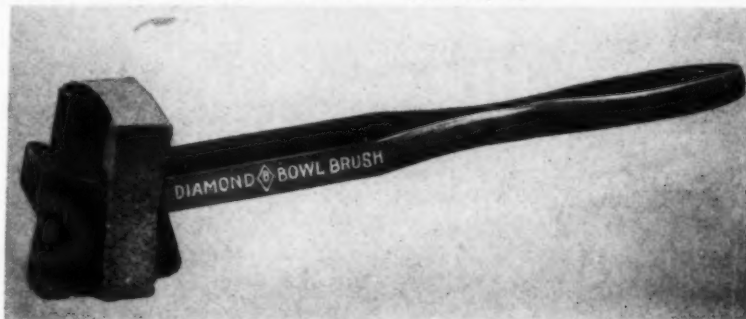
New officers of the Manufacturers' Agents National Assn., Alhambra, Calif., were announced recently by A. X. Schilling, secretary. Officers elected are: J. J. O'Sullivan, president; D. R. Bittan, eastern vice-president; J. R. Hedquist, central vice-president; E. P. Gilsdorf, western vice-president; Fred R. Young, treasurer; and A. X. Schilling, secretary. Newly-elected directors are: George Granse, chairman; J. E. Bouchard, Wally B. Swank, H. H. Jarrett, A. D. Deardorff, J. M. Paten, Duran M. Vickery, R. K. Hall and R. H. May.

### Jobber Sales Up

The current trend of business, according to figures recently released by the National Sanitary Supply Association on total distributor sales volume of 87 reporting companies, shows a rise of 5.7 percent from January, 1952 to January, 1953. Dollar sales volume for January, 1953 was \$2,131,518; December, 1952 sales volume was \$1,949,184; and January, 1952 sales volume was \$2,016,043. The same number of reporting companies had an increase of 23 percent from December, 1951 to December, 1952.

### Special Commode Brush

The "Diamond B" bowl brush, primarily developed for the cleaning of commodes was recently introduced by Illinois Duster & Brush Co., Chicago. The brush head consists of a combination of plastic bristles for



### Newport Appoints DeLaney

Appointment of Edwin G. DeLaney as sales representative in the New York metropolitan area was an-



E. G. DELANEY

nounced recently by Newport Industries, Inc., New York. Mr. DeLaney has been assigned to handle Newport's complete line of naval stores, treated resins and tall oils. He also assists the regular Newport representatives in the Philadelphia and Baltimore territories.

Mr. DeLaney first entered the coatings field as an employee of Devoe and Reynolds Co., New York, and later transferred to L. Sonneborn Sons, Belleville, N. J. From 1942 until the present he has been employed by the resin division of U. S. Industrial Chemicals Co., New York.


### Ebert Moves Offices

Ebert Products Co., Cleveland, recently announced the removal of the firm's offices from 10118 Detroit Ave. to 13412 Detroit Ave.

the scrubbing action and a pure sponge rubber pad that absorbs and holds the cleaning solution. The plastic bristles get under the upper rim and into the lower trap. Most of the common cleaning solutions can be used with no injurious effects on the brush or sponge.



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**TAMMS SILICA**  
Soft Amorphous Type  
Grades to meet various abrasive requirements . . . for all kinds of metal polishes.

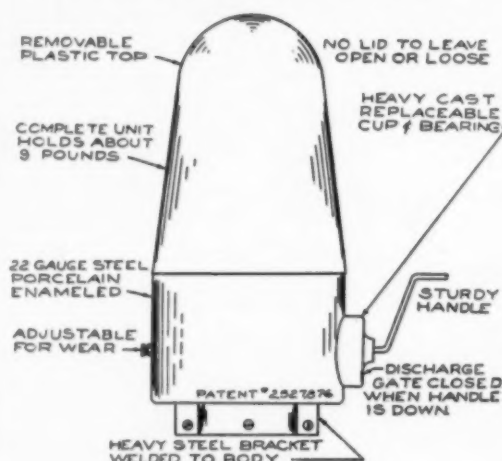
**TAMMS TRIPOLI**  
Rose and Cream Colors  
Once - ground, double - ground and air-float . . . ideal grades for buffing and polishing. Also rubbing compounds.

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Diatomaceous Earth  
Top grade, ground extremely fine . . . a milder abrasive than silica. Best for silver polish.

**TAMMS BENTONITE**  
(Suspension Medium)  
A very finely ground colloidal clay . . . wholly soluble. Absorbs five times its weight in water.

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EMULSION WATERLESS - CREAMS

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### New "Big X" Dust Mop

A large size mop designed for industrial plants, known as the "Big X" dust mop, has recently been introduced by American Standard Manufacturing Co., Chicago. Mop is made of white cotton twine that is lintless. It is sewed to heavy, pre-shrunk canvas to fit its hardwood block. Mop is easily removed for washing. "Big X" comes in sizes from one foot to five feet.

### New Motomco Rodenticide

New anti-coagulant rodenticide with insecticidal and fungicidal properties, called "Pival", has recently been announced by Warren Dolben, president of Motomco, Inc., New York. The product was recently released for general sales following a year of field and laboratory testing under an experimental permit by the U. S. Department of Agriculture. Motomco is offering "Pival" in a .5 percent concentrate for professional use to pest control operators and sanitarians and to packagers of "Pival" baits for agricultural, industrial and municipal markets.

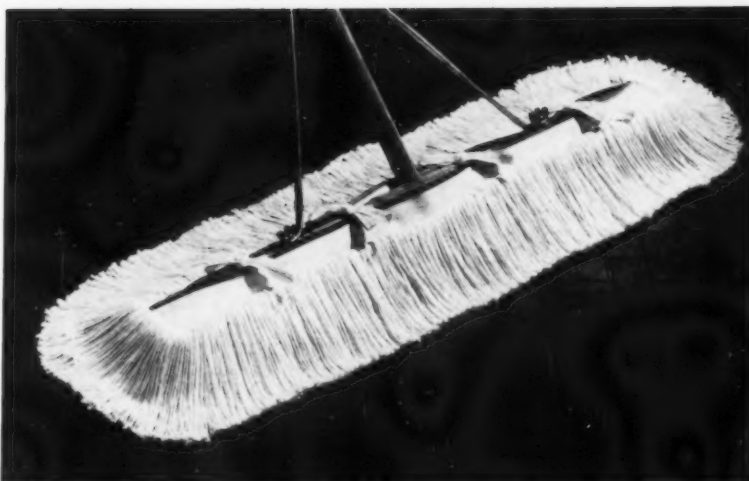
The active ingredient of "Pival" is a 2-Pivalyl-1,3-Indandione. Used in cereal baits at a concentration of one part in 4,000, its lethal action depends on continued eating over a period of several days. It is tasteless and odorless, and is said to create no bait shyness in rats and mice. "Pival" imparts to cereal baits important resistance to both insect infestation and the onset of mold, which the manufacturer states is necessary in the control of rats and mice.

### Johnson Appoints Grant

Edward J. Grant has recently been appointed New York district sales manager for the maintenance products of S. C. Johnson & Son, Inc. of Racine Wis.

### Issue Dip Cleaner Patents

Patents covering dip-type liquid and powder silver cleaners were recently issued by the U. S. Patent Office, Washington, D. C., to International Industries and Development Co., New York. The products, known



New "Big X" mop of American Standard Mfg. Co.

as "Cosmo," "Dip-Away," "Dip-Brite," "Instant-Dip" and "Quick-Dip", are manufactured by Lewal Industries, Inc., New York under a license agreement.

### Heads Consultant Service

Harold Wainess, chief sanitary officer of the Chicago Health Department, on leave from his duties as regional milk and food consultant of the U. S. Public Health Service, has recently resigned from both organizations to enter private practice as Harold Wainess & Associates, milk and food consultants, 228 North La Salle St., Chicago.

### Koppers Names Walker VP

Appointment of George M. Walker as a vice-president in the Chemical Division of Koppers Co., Pittsburgh, was recently announced by General Brehon Somervell, chairman and president. Mr. Walker, an assistant vice-president since 1951, is manager of the project department of the Chemical Division. This unit is responsible for the planning and execution of expansion of the division's activities. Prior to assuming this post, Mr. Walker organized and spent five years as manager of Koppers' central control section. He joined the firm as a draftsman in 1929.

In recognition of 30 years of service with California Spray-Chemical Corp., Richmond, Calif., gold watches were presented by A. W. Mohr, president, to Wesley W. Layne and Harold D. Huntsman at a luncheon held at the Richmond Golf Club recently. Mr. Layne is the company's comptroller and Mr. Huntsman is manager of the firm's Richmond plant.



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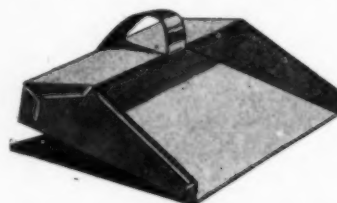
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THE HAVILAND HOODED DUST PAN**



The big Haviland Hooded Dust Pan is the answer to a custodian's prayers. It holds much more dirt than other types . . . makes pick-up and carrying easy and fast. Dirt can't be carried past the pan.

Painted in an easy-to-see red . . . the Haviland dust pan is a cinch to sell to schools, lunchrooms, offices and auditoriums. Write for our catalog. Let us help make your dust pan sales easy.

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small plant or  
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Two Ertel units that make small production efficient. They have all the desirable features of Ertel high production equipment: EFS-B FILTER has single hand wheel for simple trouble-free operation, bronze or stainless circulatory system, accommodates accepted Ertel Asbestos Filter Sheets. PORTABLE FILLER has automatic overflow system, non-drip spouts, bottle size flexibility up to gallons. And, both units can be easily moved from place to place. Write for detailed information on this important equipment... it belongs in your plant.

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**Meet all Sanitary Requirements**

... with these Three Bactericides and Sanitizers. They have been manufactured to comply with the varying Health Department standards thru-out the States.

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**KRYSTYL-T** An odorless and tasteless Chloramine-T compound. Active bactericide, germicide, deodorizer and disinfectant. Non-irritating to the hands.

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## F.T.C. Grants Extension to May 31 for Comment on Floor Wax Trade Rules

INDUSTRY'S willingness to accept, with three deletions, the third set of trade practice rules proposed by the Federal Trade Commission for the floor wax and floor polish industry was indicated at a hearing conducted by the F.T.C. in Washington, D.C., April 16 and 17. Approximately 80 persons attended the hearing, which was presided over by F.T.C. attorney Barnett Watson. Although the hearing was originally scheduled for April 16 only, it required the morning of April 17 to complete consideration of the rules, which could not be concluded in the previous day's session, which ran from 10:00 a.m. until 5:30 p.m.

Of the 20 rules contained in this third set of proposed rules for the floor wax and floor polish industry, the first nine apply specifically to the products of the industry, while rules 10 through 20 deal with unfair trade practices generally.

A request by John D. Conner, general counsel for the Chemical Specialties Manufacturers Assn., that an extension until May 31 be granted for filing of views on the rules was granted by Mr. Watson. Mr. Conner based his plea for the extension on the fact that the Chemical Specialties Manufacturers Association is holding its mid-year meeting in Chicago on May 18 and 19, at which time many members of the floor wax and floor polish industry are gathered and will consider the proposed rules. Although Mr. Watson originally denied the extension, granting one of 10 days from the date of the hearings, he later agreed to the May 31 date because of the fact that the transcript of the proceedings would not be available for study far enough in advance of the 10-day extension.

In addition to representatives of the floor wax and floor polish industry, spokesmen for the American Bleached Shellac Manufacturers Assn. and the National Paint, Varnish and Lacquer Assn. appeared and requested that shellac be specially exempted from the definition of industry product as it was

in the second set of proposed trade practice rules.

Floor wax and floor polish manufacturers concentrated their objections to the proposed rules on Rule 2, "Misuse of the Term 'Wax' as Descriptive of an Industry Product." The text of rule 2 follows:

In the sale, offering for sale, or distribution of industry products, it is an unfair trade practice to use the term "wax" as descriptive of any industry product under circumstances or conditions having the capacity and tendency or effect of misleading or deceiving purchasers or prospective purchasers thereof.

Under this rule the term "wax" shall not be used as descriptive of, or as a designation for, any industry product, when the product, after application to a floor surface and after evaporation of any carrier content, does not leave on the floor surface a film or coating which—

- (1) is a plastic solid at room temperature;
- (2) adheres to the floor surface but is susceptible of being wholly or substantially removed therefrom by any usual floor-cleaning method, including one involving the use of soap, alkalies, or detergents in aqueous solution;
- (3) coheres sufficiently for cold molding;
- (4) is capable of having its gloss increased by buffing;
- (5) is insoluble in water but soluble in hydrocarbon solvents;
- (6) in its other physical and performance characteristics is substantially the same as that of beeswax; provided, however, that an industry product shall not be represented as being a specific kind of wax unless the product, when applied to the floor surface and after the evaporation of any carrier content, leaves a film or coating on the floor surface which, in addition to possessing the aforesaid performance and physical characteristics, consists primarily of the specified kind of wax; and provided further, that when an industry product is represented as being wholly of a certain kind of wax (e.g., "100% carnauba wax," "pure carnauba wax," "all sugar cane wax"), the entire film or coating left on the floor surface after evaporation of any carrier ingredient shall, in addition to possessing the aforesaid performance and physical characteristics, be of such specified kind of wax.

Industry objection to rule 2 centered on the fact that there is a very widespread divergence of opinion as to the definition of "wax," even among so-called experts. The Commission attorney asked a number of those testifying if they thought that a product which did not contain "wax" could be called "floor wax." The con-

sensus seemed to be that whether or not a product contained "wax" the end result, that is a glossy floor finish, was that the housewife was interested in, not what the content of product is. Housewives refer to most all floor polish products as "floor waxes" whether or not they contain wax, industry spokesmen pointed out.

Rule 3, that industry representatives asked be eliminated, covers loading of industry products. It states:

"The practice of loading industry products being deceptive and harmful to purchasers and productive of unfair methods of competition, it is an unfair trade practice to load any industry product by including in such product any substance which does not perform a useful service to the full extent thereof, such as, but not limited to, the inclusion of more solvent or carrier in a product than is necessary, or by any other means to load products of the industry."

There was a willingness to compromise on this rule, by leaving in "The practice of loading industry products being deceptive and harmful to purchasers and productive of unfair methods of competition, it is an unfair trade practice to load an industry product."

Elimination of the test under Rule 7: "Improper use of the terms 'water resistant' 'water repellent,' will withstand damp mopping," etc., was also requested by industry. The test as it appears in the proposed rules reads:

Prepare suitable panels of all the floor materials for which the product is intended. Thoroughly clean the panels with an aqueous soap solution, rinse well with plain warm water and dry for 24 hours under standard conditions of 23° C.  $\pm$  1.1° C. and 50  $\pm$  4% relative humidity. Apply the product to be tested to the panels according to the directions as shown on the container thereof and allow to dry for 24 hours at 23° C.  $\pm$  1.1° C. and 50  $\pm$  4% relative humidity. Place one milliliter of distilled water 43° C. on the resultant film on each of the panels and allow to stand undisturbed for one hour under the above-mentioned standard conditions. Lightly wipe off the remaining water with a soft cotton cloth and buff the film lightly. The film should show no separation from the surface or discoloration.

### New Sanitary Supply Firm

Formation of Gateway Maintenance Supply Co., 966 Brookline Blvd., Pittsburgh, janitor and sanitary supplies and equipment firm, was announced recently by Earl G. Rogers and Edward F. Norton.



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WAXES OF EVERY DESCRIPTION

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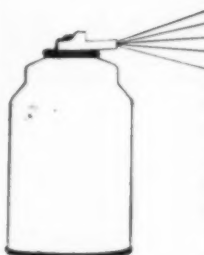
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## PER-MO WARFARIN

rat and mouse killer

Packed in 1 lb. and 4 lb. tin containers.

5 Year Guaranteed



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packed in Pints, Quarts, ½ gal.,  
gal. and 5 gal. containers or in  
Drums.

\* Per-Mo Flameproof Liquid  
packed in Drums or gal. Containers.

\* Per-Mo Rat & Mice Liquid  
packed in 8 oz. bottles or in Gals.

\* Per-Mo Rat Bits  
made with RED SQUILL (Fortified)  
packed in 4 oz., 16 oz. and in  
Bulk.

\* Per-Mo Rat Paste  
made with RED SQUILL (Fortified)  
packed in 4—8 and 16 oz. jars.

\* Per-Mo Brown Rat Killer  
made with ANTU. Packed in 4—8  
and 16 oz. jars.



\* ALL PER-MO PRODUCTS CAN BE PACKED  
UNDER YOUR OWN PRIVATE LABEL



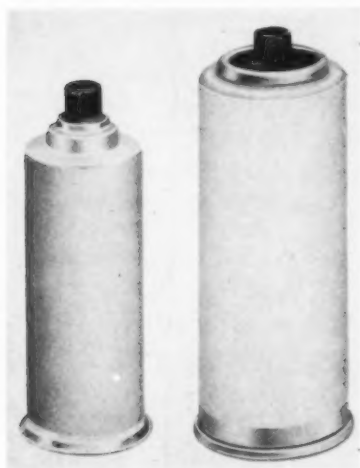
Write today. Full particulars  
first letter

**PER-MO PRODUCTS CO.**  
1715 East 36th Street  
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### New Viking Aerosol Valve

A new Viking non-metallic, aerosol or aerated, low pressure valve, has recently been announced by Vik-



ing Valve Co., Minneapolis. All working parts are made from a non-leaching, special phenolic plastic and a special formulated synthetic rubber. There is no metallic plating to corrode the valve seal or cause ingredient change. The Viking aerosol valve permits easy filling of both ingredient and propellant, with a minimum of gas loss, into a vacuumized container, if pressure filling of the valve is desired.

Viking's principle of a standard valve seal allows a vacuum to be pulled in the can, thus eliminating moisture. Pressure ingredient filling into the vacuumized container and then pressure propellant filling follows. The pressure filling is done through a "one way" hole at a flow rate for both propellant and ingredients of four ounces per second using less than 300 psi. Dispensing orifices are drilled through a thick member to retain the propellant in larger contact with the ingredient. As the valve contains no metal, no metal or solder is required for fastening to aluminum or other types of containers. The orifices can be changed to accommodate in-use requirements of the dispensed product.

### Lewal Names Hughes

Paul M. Hughes has recently been appointed as head of the advertising and sales promotion department of Lewal Industries, Inc., New York, producers of Instant-Dip Magic Silver

Cleaner. He formerly was with Louis Marx Co., New York.

## Shellac . . .

(From Page 159)

Others who are fortunately in the minority still produce emulsions which have the opposite effect. For these borderlike systems nearly equal proportions of shellac and wax should be assiduously avoided.

Within the last ten years the manufacturers of bleached shellac have made tremendous capital investments in improved equipment. To those readers who may have worked with shellac a number of years ago it would be a sound idea to examine the currently available refined dewaxed bleached shellac. Its use in floor wax is only an example of its possibilities in other products in the emulsion fields. It is a vastly improved product.

I should like to conclude this with a little crystal gazing into the future. It is reasonable to believe that water dispersions of shellac may find a firm place in many industries which have yet to explore the possibilities shellac presents. The textile industry might well consider certain applications i.e., as an agent for producing a "hand" to cheaper fabrics and in the manifold operations in which other resin emulsions have long been used. The unusual spreading properties of these shellac dispersions which the water emulsions wax manufacturers have so wisely applied to their problem should warrant careful study by those working with all fibers.

To those who have spent their lives working with shellac an acute awareness that it is one of the marvels of creation is inescapable. The further the subject is pursued, the greater is the realization that its possibilities as a raw material have not been sufficiently explored. Under today's competitive conditions businessmen who are accustomed to look ahead may find a study of these prospects highly profitable. Shellac has tenaciously maintained its economic position throughout the centuries and under scientific application the indications are that this will continue.

### Hercules Elects Forster

Albert E. Forster, vice-president and a member of the executive committee since 1951, was elected



A. E. FORSTER

president of Hercules Powder Co., Wilmington, Del., at the monthly meeting of the board of directors, April 29. He was elected also chairman of the executive committee. Mr. Forster succeeds Charles A. Higgins, president and chairman of the board, who resigned as president, a position he has held since 1939, in accordance with the company's retirement policy. He also resigned as chairman of the executive committee. Mr. Higgins continues as chairman of the board, a position to which he was elected in 1944.

Mr. Forster has been a director since 1940. He has been with Hercules since 1925, when he joined the firm as a technical service man in the San Francisco office. He was born in Cuernavaca, Mexico, receiving his early education in San Francisco, and later graduating from Stanford University with a B.S. degree in geology. Subsequently he obtained an engineer of mines degree in mining engineering.

A native of Gillingham, Kent, England, Mr. Higgins was educated in private schools there. He came to the U. S. in July, 1915, as chief chemist with Union Powder Co., Parlin, N. J., and four months later became associated with Hercules Powder Co., when Hercules acquired Union Powder Co. Mr. Higgins transferred to Wilmington in 1916 as assistant to the chemical director.

↓                      ↓

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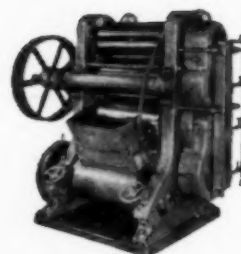
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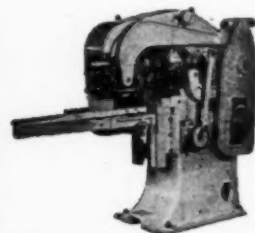
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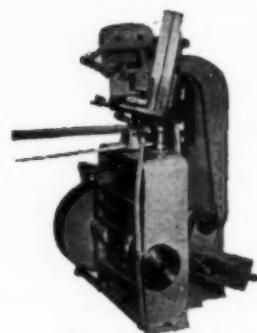
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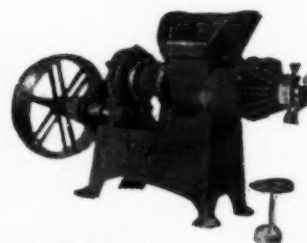
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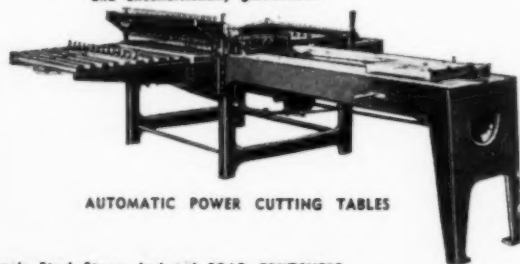
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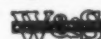
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(See page 140)

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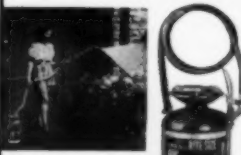
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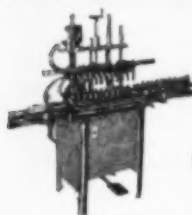


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**For Sale:** Pacific coast specialty manufacturing company for sale. Presently manufacturing liquid non-ionics. Established distributor outlets western United States and Canada. Excellent western outlet for eastern concern desiring western distribution. For details reply Box 745, c/o Soap.

**For Sale:** New, stainless steel tanks, fabricated of No. 302, 16 gauge, No. 4 finish stainless steel. All tanks have 2" radius corners and

bottom drain. 75-gallon size: 28" x 24 3/4" x 25"; 115-gallon size: 42 1/2" x 24 3/4" x 25". Supply limited. Priced below cost. Dairy Equipment Co., 1444 E. Washington Ave., Madison, Wiscon.

**For Sale:** Proctor & Schwartz 6-Fan automatic soap chip dryer. 2-roll chilling unit, large roll 48" dia. Empire State foot presses. Soap frames. Allbright-Nell 4' x 9' chilling rolls. Blanchard #14 soap powder mill. Lehmann 4-roll W. C. 12" x 36" steel mill Houchin 8 1/2" x 16" 3-roll and 18" x 30" 4-roll Granite Stone Mills. Kettles and tanks.

iron, copper, aluminum and stainless. Dryers vac. & atmos. Jones automatic soap presses. Slabbers and cutting tables, hand & power. Crutchers. Six-knife chipper. Filter presses 12" x 42". Wrapping & sealing machines. Powder, paste & liquid mixers. Rotex sifters. Filling machines, Grinders, Hammer mills. Colloid mills. Three-roll steel mills 8" x 22" to 16" x 40". Portable elec. agitators, pumps, etc. Send for bulletin. We buy your surplus equipment. Stein Equipment Company, 107-8th St., Brooklyn 15, N. Y. STerling 8-1944.

Books—See page 140

## FOR SALE: MODERN SOAP PLANT

Located on eastern seaboard on plot 200 x 300 with double track siding. Plant has 75,000 sq. feet floor space and two 275 HP oil fired boilers. Equipped for modern manufacture of all types of laundry soaps, powders and granules; also package goods. Two large soap dryers and other modern equipment for annual capacity of twenty million pounds soap. For further information, communicate with

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New York 1, N. Y.

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## Used SOAP MACHINERY

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|---|--|
| 1—Lehman 12" Plodder.   | 2—Package Machinery Co. Model N & Model TT Soap Wrapping Machines. |
| 1—Houchin 14" x 36" 5-roll inclined water-cooled Mill, 30 H.P. motor. | 3—Steel vert. jack. Soap Crutchers, 2000 lb. and 1000 lb.          |
| 1—Baker 20" x 33" 5-roll Mill, 55 H.P. motor.                         | 1—6 knife Soap Chipper, m.d.                                       |
| 1—Jones A, automatic horizontal Soap Press.                           | 2—Pneumatic Scale Packaging Lines.                                 |
| 1—Jones automatic "K" Press.  |  |

MISCELLANEOUS — Filter Presses 12" to 42"; Powder Fillers; Powder, Paste and Liquid Mixers; Rotex Screens; Hammer Mills; Soap Frames; Dopp jacketed Kettles 100, 350, 600 gallon; Blackmer Pumps; Tanks; Carton Gluer-Sealers.

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- SHAVE CREAMS
- TOOTH PASTE
- DEODORANTS
- PINE DISINFECTANT
- CASTILE SHAMPOO
- CREAM SHAMPOO
- PHARMACEUTICALS
- INDUSTRIALS
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AUTOMATIC EQUIPMENT HANDLING

Bottles • Jars • Collapsible Tubes

Please notice: All equipment—including soap crutchers and freezing tanks—is stainless steel.

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## Trade Marks

(From Page 85)

since Dec. 31, 1929.

**Nylast**—This for preparation for washing textiles and textile fabrics. Filed Aug. 21, 1952 by Seeman Brothers, Inc., New York. Claims use since Oct. 7, 1950.

**Dazy Spray**—This for air freshener preparation. Filed Sept. 25, 1952 by Drackett Co., Cincinnati. Claims use since May 15, 1952.

**Nonic**—This for liquid non-ionic synthetic wetting agents. Filed Dec. 31, 1952 by Sharples Chemicals, Inc., Philadelphia. Claims use since on or about Feb. 11, 1949.

**Chairman**—This for shaving cream. Filed May 28, 1952 by Stanley Home Products, Inc., Westfield, Mass. Claims use since Oct. 2, 1951.

**Kislav**—This for detergent preparation for use in cleaning gloves of leather, wool, cotton, nylon, silk and/or combinations of these materials. Filed Apr. 7, 1952 by Buscarlet Glove Co., New York. Claims use since Mar. 1, 1935.

**Betalene**—This for wax remover or cleaner. Filed Apr. 17, 1952 by Western Chemical Co., St. Joseph, Mo. Claims use since Mar. 21, 1946.

**Tenco**—This for disinfectant and household germicide. Filed Feb. 13, 1951 by Gerson-Stewart Corp., Cleveland. Claims use since January 1941.

**Kilgore's plant-o-cide**—This for insecticide. Filed Feb. 9, 1952 by Kilgore Seed Co., Plant City, Fla. Claims use since April 1949.

**Para-cake**—This for chemical preparation, to be used as a moth killer and a container therefor. Filed Feb. 15, 1952 by Henry A. Enrich & Co., New York. Claims use since Jan. 21, 1952.

**Triogen**—This for fungicides, insecticides, and disinfectants for plants, seeds, etc. Filed July 8, 1952 by Rose Manufacturing Co., Beacon, N. Y. Claims use since July 11, 1932.

**Banagrub**—This for insecticide. Filed Aug. 11, 1952 by American Scientific Laboratories, Inc., Madison, Wis. Claims use since July 17, 1952.

**Super Ad-it**—This for mildewproofing agent. Filed Aug. 27, 1952 by Nuodex Products Co., Elizabeth, N. J. Claims use since Aug. 4, 1952.

**Dynol**—This for moth-proofing composition. Filed Oct. 8, 1952 by Bostwick Laboratories, Inc., Bridgeport, Conn. Claims use since May 1951.

**Magic**—This for rubbing and polishing compound for enameled, lacquered, and varnished surfaces. Filed Oct. 17, 1950 by Magic Iron Cement Co., Cleveland, O. Claims use since January 1948.





## Tale Ends

**A**S this issue is delivered to an eagerly waiting world of industry and science, some seven hundred members of the Chemical Specialties Manufacturers Assn. descend upon the fair city of Chicago like ants on a honey cake. They gather to discuss their common problems and to argue. Insecticides, floor waxes, aerosols, disinfectants, and what not are being given a good going over. That low rumble at the Drake Hotel is not a long line of passing ten-ton trucks. Merely the simultaneous meetings of six CSMA sections. The survivors will leave Chicago for home about May 20.

On our front cover this month is a rather serious picture of Herbert W. Hamilton who recently completed ten years as secretary of CSMA and who has worked unceasingly in the interests of the Association and the industry at large for thirty years. We tried to find a shot of him adorned with a genial smile, but no luck. This one is the best we could find. Serious bloke, you know. Old New England Yankee stock and all that. But he does smile and often. To that we attest. Probably the most surprised person this side of Hong Kong to see his picture on the front cover this month is none other than Herbert W. Hamilton.

Have the Sollys of Philadelphia been hiding their light under a bushel, artistically that is? Never have we suspected, nor did anybody tell us that Bob Solly,—Bob is son of Charley Solly, prez of the Harley Soap Co.,—has a really fine baritone voice and knows how to use it. His singing at the recent National Sanitary Supply meeting in Chicago, especially the National Anthem at the annual banquet, really made a hit. But, as Marty Peters, past prez of NSSA, pointed out: "From now on Bob will probably be known as the singing soap salesman." Our reaction is . . . with a voice like that why bother with the soap business?

Shades of the Peet Brothers of Kansas City! They are dropping Peet out of the Colgate-Palmolive-Peet name. In the interests of brevity, terseness, et al, the company hereafter will be known just as Colgate-Palmolive Co. When the three-word name was first selected right after the old Peet company had been absorbed, it seemed sort of long and unwieldy. But soon, it became C-P-P, and everybody got used to it. Now comes new zip, new streamlining. Maybe when that Dublin newspaper last summer spelled the name, "Colgate-Palmolive-Peat Co.," it was too much for the Jersey City brass. Maybe that did it.

Calvert Whiskey's latest "man of distinction" is none other than Percy Magnus, well-known prez of Magnus, Mabey & Reynard, New York political light, Connecticut squire and breeder of

fine turkeys. Something like ten million copies of his picture taken at his beautiful summer home in Connecticut,—Calvert highball in hand,—are appearing in four-color advertisements currently in leading national magazines. Well, gentle reader, after noting the healthy, handsome, happy look which Perc wears in the picture, we also are giving serious thought to quitting this scotch and soda diet and switching to Calvert's.

Often we note the expression, ". . . regardless of whether soap or synthetic detergent is used." Says April "Silicate P's & Q's" of Philadelphia Quartz: "That terminology, by which these washing agents are classified, is technically unfortunate. Soap is as truly a synthetic product as its more modern counterpart, and both are detergents, but the distinction in names has become so generally accepted that it is likely to become a fixed part of our vocabulary." Maybe "syndets" for the newer ones is the solution. Dr. Foster Snell, we think he invented the word, for he was the first we

ever heard use it,—believes "syndets is the answer. Short, concise, clear,—but, boy, how we hate synthetic words!"

Of antiseptic soaps, Dr. Arthur M. Edwards, medical director of the American Steel & Wire Co., stated recently in the company house organ: "One of the newer soaps contains hexachlorophene and is widely claimed as an excellent antiseptic. This is not so. Hexachlorophene, carbolic acid, and other agents are truly effective killers of bacteria, but in soap, they add nothing but cost. For these agents to exert their true antiseptic action, one would have to work up a rich lather and leave it on for several hours." Obviously, the good doctor argues from the specific to the general,—seemingly a weakness of medical men,—is not up to date on his facts, has failed to examine reports of authentic bacteriological work on the subject.

Via the grapevine we head P&G is ready to flood the country with a new "buy one, one free" Tide offer. Mrs. Housewife buys two packages of Tide for 27 cents, and if she's lucky gets a coupon worth 10 cents. This brings the per package cost down to around nine cents.

## Impact!

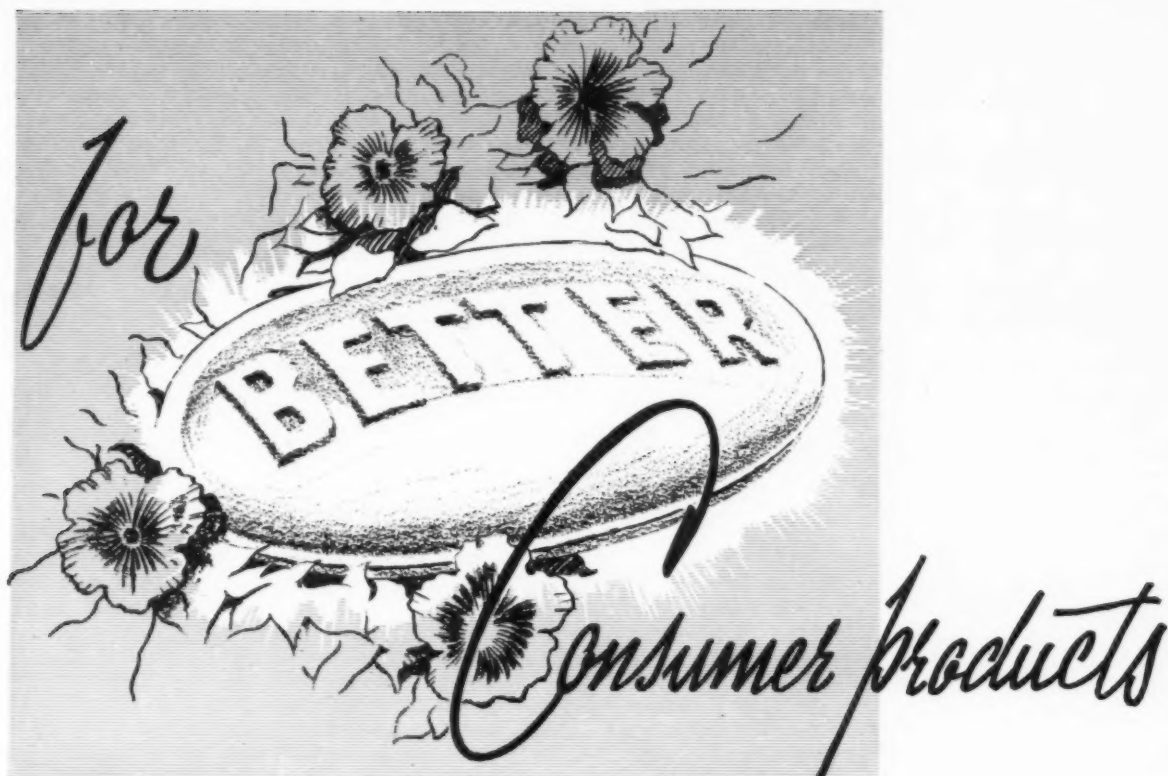


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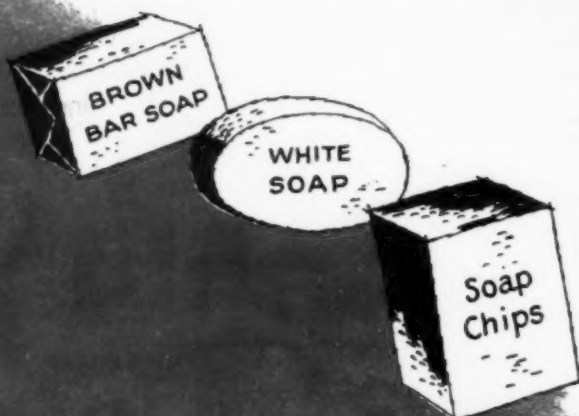
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1 lb. lots .....	\$2.15 lb.
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